



# **Tom Swift and His Flying Lab**

**(The first book in the Tom Swift Jr series)**

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## CHAPTER 1

### MENACE FROM THE SKY

"SO YOU'RE the famous Tom Swift!" said the pretty girl—no, the very pretty girl—behind the counter. She pushed a tray bearing two steaming coffees across the countertop as she eyed the two young men standing in front of her. One of them, whom she already knew as a "regular," was the taller of them by a shade, with black hair and gray eyes and the square muscular build of an athlete. He seemed on the verge of breaking out laughing.

But her words were aimed at the other one, whose blond hair was close-cropped but carelessly ragged and whose deep-set blue eyes were, it seemed to her, full of thought. This one was more slender, like a swimmer or a runner. At the moment he seemed to be struggling to come up with something to say.

"Um, yes, that's right," replied Tom Swift. "I mean—about my name, not the famous part. I'm not famous."

"Not yet," interjected Tom's friend Bud. "But just wait until the world sees that new Flying Lab of yours!" After a moment of awkward silence, Bud suddenly whacked the back of his hand against his forehead. "Oh, sorry—manners! Miss Bashalli Prandit, allow me to introduce my good friend Mr. Thomas Swift. Mr. Swift, Miss Prandit." Tom shook Bashalli's hand as a grin broke out on his face. "Pleased to meet you. Bud here makes it his personal mission to introduce me to—to—"

"To all the pretty young girls in Shopton?" Bashalli smiled reassuringly. "It's really a nice compliment, isn't it? And I have wanted to meet you, Thomas Swift."

Tom looked blank. "You have? By the way, how did you know my name?"

"You mean, besides the fact that you look just like your pictures in all the papers? Besides the fact that you came in with Bud Barclay, who promised to bring you by? Besides—this?" She pointed a delicate finger at Tom's chest and he tilted his chin down to look.

"Oh, right," said Tom; "my name tag. We were just leaving from a lecture up the street when Bud said we should—"

"And here we are," finished Bud. "I told Tom The Glass Cat has the best fresh-brewed coffee in town."

"You told the truth, then," commented Bashalli with a quaint, clipped accent. "The coffee is very good; the tea is better; and the scones are—what is it you say here?—to die of."

Tom started to correct her, but got only as far as "To die f—" when Bud coughed loudly and unconvincingly, cutting him off. Getting the point, Tom asked instead, "So, your name, um—Greek, isn't it?"

Bashalli shook her head, beginning to wipe the counter as the boys sipped their coffees. "I hardly think so. It is Pakistani, and Pakistan is where I was born. My mother was from India, though, and her mother was a British nanny from the old times when the British ruled in Calcutta. So this charming accent you hear is a mixture of many things—even

American, because I have been in this country since I was twelve years old."

As Tom and Bud moved to sit down at a little table near the coffeehouse door, Bud motioned for Bashalli to join them. She cast a quick look around—there were no other customers at the moment—and back toward the kitchen. Then, deciding, she tossed her cloth aside and gracefully eased down in a chair. "Well, it does feel good to sit down," she said. "My older brother Moshan, who is boss here, is very sweet and dotes on me, but he says we must show Good Old American Industriality at all times. And what is it, do you know?"

Bud nodded in Tom's direction. "It's sitting right there, personified as Thomas Edison Swift."

Tom reddened at this, and Bashalli said, "Ah, how sweet, a man who blushes!" But seeing that Tom was embarrassed, she quickly added, "Now then. Thomas Edison—your third President, I do believe."

"No," Tom replied, "though that was a good guess. Edison was a very great inventor. The light bulb, the phonograph—that was how music was played before CDs—all sorts of improvements to the telegraph; electric dynamos..."

"Then he was a very important man," said Bashalli, "and I think you have his name because you too are to be very important." Tom started to shake his head modestly when Bud chimed in with enthusiasm. "Believe it! Tom comes from a whole line of important people, people who have changed the world by—by inventing most of it!"

And as Bud Barclay explained it, with Tom correcting him now and then on a point of fact, it seemed to be just as he had said.

"First was Henry Swift, who came to America in 1751 with his young bride," began Bud, as if reciting. "He claimed to be a grandson of Jonathan Swift, the writer, but nobody really knows."

"Jonathan Swift," mused Bashalli. "I have heard that name. I know! The story of the little people."

"Right, Gulliver's Travels. Which was a pretty fantastic story—maybe that's where the family got its inventiveness."

Bashalli nodded. "I believe it could be possible."

"A few generations later," Bud continued, "there was Lewis Swift, who became a famous astronomer."

"He discovered comets," said Tom.

"The science element," commented Bashalli.

Resuming the list, Bud said, "Barton Swift, he's the one who really made the family fortune in the 1890s with the first Swift patent, the... er, it doesn't sound like much, but it saved a lot of labor—a motorized butter churn."

At this Bashalli put a hand to her mouth to suppress a giggle. "Please forgive me," she said. "It was the way you said it, Bud."

"That's okay," said Tom with a grin. "Now we get into the twentieth century, and Barton's son, the first Tom Swift—Thomas Archimedes Swift. My great-grandfather."

"Ah, that must be the one we read about in the books," said Bashalli thoughtfully. "All

those marvelous inventions!"

"That's right," Tom responded; "his adventures were more like fiction than fact. There were lighter-than-air dirigibles—"

"Blimps," Bud explained.

"And also regular motorized aircraft, electric automobiles, submarines, a giant cannon—the forerunner of the spent-plutonium cannons we use today—an x-ray television, his electric rifle—"

"The TASER used by police stands for Tom A. Swift Electric Rifle," interjected Bud.

"Then there was his magnetic silencer for airplane motors, and what he called his 'photo telephone' which is like an early version of the videocams people attach to their computers!"

"I am overwhelmed!" cried Bashalli. "Is there anything he didn't invent?"

"Oh, sure," replied Tom blandly. "The jet engine, the home computer, the atom bomb..."

"A pity," commented Bashalli dryly.

"Old Tom's kids were kind of a dud generation," Bud resumed, hastily interrupting Tom.

"They mostly managed the Swift Construction Company, which Barton had started here in Shopton with the proceeds from the—from his invention—and later on, Swift Enterprises."

"But my father, Damon Swift—"

"Named after a pal of the first Tom Swift," said Bud in a mock-whisper.

"Dad had a lot to do with the early development of the space shuttle; and then later he worked under contract on several of the automated Mars probes."

Bashalli smiled with just a touch of mischief. "The ones that worked, I would suppose."

"Sure," Tom responded. "That is... mostly."

"And now this Damon Swift runs Swift Enterprises, that wonderful huge place that goes on and on at the edge of town. And you, the new Tom—you are the genius inventor in residence?"

"You got it!" exclaimed Bud. "My pal has brains where most of us have bones. Wait'll he tells you about the Sky Queen, his new—"

But the conversation was interrupted as Tom, who was sitting nearest the open door, abruptly rose to his feet, a strange expression on his face.

"Listen! You hear that?"

Setting his coffee cup on the table, Tom dashed out onto the sidewalk, followed by Bud and Bashalli. All along Commerce Avenue—Shopton's major thoroughfare—people on the sidewalk were looking right and left, up and down, seeking the cause of the uncanny whistling sound that seemed to be coming from some long ways off, but which was steadily getting louder.

Suddenly Tom pointed. "Look!"

Toward the northeast Commerce Avenue ended at the recreation pier on Lake Carlopa. In that direction, above the lake, a dark speck was silhouetted against the pale blue afternoon sky.

"What is it?" asked Bashalli, shading her eyes against the glare.

"I don't..." Tom began. And then his face blanched. "It's coming this way!"

Reacting quickly, Bud instinctively yanked Tom and Bashalli back toward The Glass Cat. "It must be homing in on Commerce Avenue!"

The three young people had no time to think. Something fiery-white and oblong flashed by them at second-story height, and they felt a sharp blast of heat, as if a furnace door had briefly opened and shut. In an instant the object had passed beyond the southwest end of the avenue eight blocks distant, vanishing from sight behind a stand of tall trees that blocked their view.

Suddenly the ground trembled from a massive shock! The plate glass window of the coffeehouse split into a spiderweb-pattern of cracks, and a deep, full-throated Boom! rolled over Shopton.

"Tom!" whispered Bud, breathlessly. "That's—"

"I know, Bud," Tom said, his voice heavy with concern. "That's the direction of Swift Enterprises!"

## CHAPTER 2

### THE INVISIBLE INTRUDER

"I'D BETTER check in with Harlan," Tom said tensely.

"If you want to use the phone in—" Bashalli began; and then she paused. Half-turning to Bud, she asked in a low tone, "Is he all right? What is he doing?"

Tom was standing motionless on the sidewalk, a somewhat far-off look in his eyes.

Bashalli could see barely-perceptible twitching movements in Tom's jaw and lips, which were slightly parted, and now and then he frowned and nodded his head as if listening to a voice. But there was not a sound to be heard!

Despite the gravity of the situation Bud chuckled and drew her aside, speaking softly.

"It's just science, Bash. See that little metal thing on his shirt collar?"

Bashalli nodded. "Yes. You have one as well. I thought it was just a decorative pin."

"That's what you're supposed to think. But it's really a kind of telephone."

"Aha! An electronic mind reader?"

Bud laughed softly. "Not yet! The gadget picks up the movements in your jaw, tongue, and throat that correspond to spoken words, puts the words into your stored 'voice' pattern, and then sends it by digitized signal to the receiving unit. You touch it to activate it, then tell it what ID number to 'dial'. When you're using it for listening, it beams a signal right into your... your hearing nerve in a way that blocks-out extra-neous sounds. It's called a televoc."

"I much like the idea that no one will have to yak on a cellphone while waiting in line," said Bashalli with a smile. "By the way—'auditory nerve'."

"Bud—listen!" Tom called out. "I'll put Harlan on your televoc." But as he moved to touch the tiny device, he glanced in Bashalli's direction and paused. "No—I'll put it on audible mode, so we can all hear."

At a touch of his finger, the air around Tom—but only up to a distance of about ten feet—was filled with the deep and harried voice of Harlan Ames, Swift Enterprises'

longtime chief of security.

"—so the damage appears minimal, as far as what I see out my window," Ames was saying. Tom cut him off.

"Harlan, Bud's online now. Would you summarize what you just told me?"

"Sure," Ames replied. "In fact, I'm starting to get in some reports now, so I have more information for you too, Tom. About three minutes ago something blew a big hole in the dirt field just off runway eleven. I thought it was an underground pipeline accident, or maybe a bomb. What you describe sounds like a missile—and I'm getting calls from all over the plant that our crews saw something zoom over the outer fence and dive right into the ground. Thing is, this object never showed up on Enterprises radar, not the GH nor the FH."

"What are those?" whispered Bashalli to Bud. "GH and FH?"

"GH stands for 'ground-hugging'," Bud whispered back. "It's our special radar security system that we use inside the Enterprise grounds. 'FH' means 'far-horizon'. We use it to keep an eye on aircraft."

"Is there any reason Bud and I shouldn't come in?" Tom queried Ames.

"Knowing the two of you, I doubt I could stop you. At any rate, there's no indication of any further danger at the moment."

Unless there's another phantom missile attack! thought Tom as he broke the connection with Swift Enterprises. "C'mon, Bud!" he said. Then turning hastily to Bashalli, he added, "Sorry to run off, but... come by some time and I'll give you the tour of our Swift Museum."

"Thank you, young Mr. Swift," she responded blithely. As the two took to their heels, she added to herself, "It's a 'date'!"

In moments Bud's sleek convertible was arrowing down Commerce Avenue toward the grounds of Swift Enterprises. Although knots of people were standing and talking here and there, puzzled and alarmed, there was no sign of serious damage, and no emergency vehicles were in use.

"Well, the stoplights are all in working order," murmured Bud as he ignored one, swerving around a stopped pickup. "I guess that's a good sign."

Taking the private Swift-family drive from the main road, Bud pulled up to the perimeter fence of Enterprises, slowing only slightly as the gate sensed the transponder in his car and slid open. Parking in Bud's reserved space, the boys leapt out and quickly made their way to the nearest "ridewalk"—the system of flexible moving ramps that criss-crossed the facility. Stepping over to a second ridewalk that curved elegantly around the main administration building, spiralling up to third-story level, they were in Harlan Ames's large office in less than a minute. Tom was pleased to find his father and several others already present.

"Dad!" Tom exclaimed. "Do we know what's going on yet?"

"Tom, Bud." The elder scientist nodded at his son and his son's best friend. "What we do know is good—there were no injuries reported, and no obvious damage to any structures. Beyond that..."

Ames gestured at a large, flat screen mounted on the wall. "Take a look. We're getting a feed from the airfield security cams, which are mounted high enough to give us a good angle."

Tom stroked his chin thoughtfully, frowning. The monitor showed a deep elongated scar in the earth, beginning just beyond the edge of the runway tarmac. Though a smoky haze obscured the view somewhat, the fissure appeared to broaden out over a distance of several hundred feet, ending in a craterlike gash.

"Man!" Bud burst out. "Now I really know what they mean when they say something plowed into the ground. You could plant a firehouse in that hole!"

"Can you see anything of the missile?" asked Tom, his eyes glued to the screen. In response Ames upped the magnification and zoomed in on a small section of the crater wall.

A round tunnel-like opening showed black against the charred dirt and debris!

"The missile—or meteor—was white-hot with friction when it sheared into the ground," explained Mr. Swift. "It not only forced the earth aside by its trajectory but turned the soil partially molten. The object slowed but continued forward right into the compressed solid ground, creating its own 'lava' tunnel, which is now cooling and hardening. We'll have to wait for the cooling process to finish before we can enter the tube and retrieve the object."

Tom cast an impatient look at his father. "RobiTec could go in there right now."

Damon Swift chuckled and nodded his agreement. "I didn't think you'd care to wait, Tom. Yes, Harlan and I have already agreed to 'turn the dogs loose' on our mysterious visitor."

"RobiTec" was the nickname Tom had bestowed on a remote-controlled robot-mobile Swift Enterprises had developed from his concepts and sketches. The compact, agile machine was designed to assist the police or military in examining and containing explosive devices, and could withstand devastating blasts.

"It'll take about an hour to get RobiTec up and running," declared a technician after a brief televoc conversation with his department. "We don't want him going on the blink somewhere inside that crater."

"Then we'll have time to visit the Sky Queen." Tom motioned to Bud to join him. "I want to make sure the hangar wasn't compromised by that shockwave."

Harlan Ames held up a hand, signaling Tom to wait. "Hold it a sec, Tom. I'm getting a message from the employee gate—someone is trying to get in without proper ID, and he's demanding to speak to you!"

A smile slowly broke out on Tom's face, which spread, in a glance, to Bud. "Oh? Well, I think we can spare a moment to drop by."

Long before the ridewalk carried them within sight of the gate for employees, Tom and Bud could hear a booming foghorn voice rebounding from the nearby buildings—a voice with a very pronounced Texas drawl.

"Brand my fuselage! Looks like I jest got home in time—in time fer every dang thing to get turned six ways from Sunday! You let me in there, young feller, an' mebbe I'll fergit

t'tell the boss you kept Chow Winkler from his kitchenly duties!"

As the boys came into view, Chow's face lit up in a big malicious grin, and he waved at them jauntily. "Sorry, pard, too late," he said to the youthful uniformed guard blocking his way. "Might as well stick a iron skillet on yer backside an' head fer the woodshed."

"Mr. Swift, do you know this man?" cried the security guard, red in the face. "He says he doesn't need an amulet, won't take one, called me a low-down—"

Tom tried to look sympathetic, but could barely suppress a laugh. "Yes, I... think I grasp the concept, Mitch. You're new here and Chow's been on vacation. He's a good friend and a trusted employee."

Chow beamed, adding: "And the best durn cook east of the Pecos'n west of the sun!"

Chow, whose real name was Charles, had been a chuck-wagon cook, employed for many years by a ranch in New Mexico. He had become acquainted with Tom and his father while they were building Enterprises' atomic research station, the Citadel, located in an isolated spot in the southwestern desert to which Chow's ranch was a near neighbor. It had not been long before Tom had become fast friends with the colorful roly-poly westerner, and when the Swifts returned to Shopton in upstate New York, Chow had attached himself to the party. He was now employed as private chef for Tom and Mr. Swift, not only at the plant but when off on their frequent travels around the globe.

"Say, this here feller at the gate tried t'put this li'l ole good-luck charm on my arm—an electric armpit!"

"You mean one of our electronic amulets." Tom laughed. "Without that little bracelet, Chow, you'd have our ground-hugging radarscopes working overtime."

"How come?" Chow asked, eyeing the bracelet.

"It sounds complicated, but it's really simple," Tom explained. "That little bracelet 'traps'—cancels out—radar impulses and keeps them off our scopes. We not only have the big radar dish on top of the main building for everyone to see, but another one set up in the new underground hangar where we're building the Flying Lab. So," Tom went on, as Chow looked a little perplexed, "anyone who doesn't wear an amulet causes a little dot of light to show up on one scope or the other. That's how we can tell if we have an unwanted visitor."

As Tom concluded, he shot a glance at Bud that seemed to say: Of course, the system has already failed to warn us of a very important intruder.

"Well, your ole radar kin have the day off, far as I'm concerned," Chow chuckled.

"Guess I'll get useta havin' a piece o' jewelry on my arm—leastwise as long as it don't get in the way when I'm flippin' flapjacks."

"That shirt of yours might set off alarms all by itself!" Bud exclaimed, jokingly covering his eyes. "Tom, I don't think anything could cancel out those radiations!" Chow's taste for wildly colored shirts in the southwestern style was notorious throughout Swift Enterprises, where he was regarded with affection as the Swift "mascot." This particular shirt, which somehow managed to combine lime-green with a fiery orange, was his most vivid yet.

"Picked up this li'l number in Fort Worth," Chow said with evident pride. "One of a

kind!— in this size."

The three began ride-walking toward the underground hangar. Chow's weathered face turned grave when Tom told of the mysterious missile attack upon Swift Enterprises.

"Dang sidewinders!" muttered the old cook. Then his face brightened. "But say, boss, if'n you're gonna take a look at the Sky Queen, how's about me dogeyin' along? When I left t'go, she was purty much jest a skeleton."

"Sure," agreed Tom. "Besides, I want you to give the galley the once-over."

The three transferred to another moving walkway which smoothly slanted downward into a broad underground corridor. They hopped off in front of a closed sliding panel.

The next moment Chow's jaw dropped as the panel opened for Tom and the whole of the vast underground hangar came into view. Under a battery of high-intensity worklights, a majestic silver-skinned craft gleamed and beckoned—Tom's amazing Flying Lab!

"Wait until you see her insides, Chow," said Bud, bubbling with obvious excitement.

"This baby not only has the kitchen sink, but the whole kitchen!"

The enthusiasm was infectious, and Tom grinned broadly in spite of himself. "I like to think our three-decker has everything, including—"

"Three-decker? You mean this here Sky Queen has three floors?" Chow leaned so far back to look up at the big ship that he almost fell over on his balding head.

"That's right," Tom answered. "Come on. I'll show you around."

Weaving through a crew of technicians busily at work on the Flying Lab's outer hull, Tom climbed a ladder through a utility hatch on the underside, Chow and Bud following.

"This first level is partly for storage," Tom explained as they stood inside. "We'll keep spare equipment, experimental supplies, and luggage down here. But look back there—see those sliding doors? Behind the doors is our flying hangar. We're going to carry two baby aircraft — a micro-sized jet plane we call the Kangaroo Kub and a jet-assisted helicopter, the Skeeter."

"That name's in your honor, Chow," commented Bud. "Last summer you had a few words to say about the 'skeeters' swarming around Shopton."

"Uh-huh." Chow's eyes widened as he took in the sleek modern curves of the ship's interior, which projected a feeling of luxury and open space. "Y'know, this ain't nothin' like one o' them cramp-sided air buggies I took back to San Antone." Then he added, "Where's the galley? We got to eat!"

"We'll come to it."

Next, they went up a flight of narrow, steel-ribbed stairs and into the largest sector of the ship's interior. Forward was the control deck containing the pilot's and co-pilot's seats.

The seats faced a wide, multi-layered plexiglass viewport, tinted against the blinding sunlight of high-altitude travel. The viewport curled around the corners of the fuselage to the right and the left, providing a degree of sideview, and at the middle between the seats it dipped downward to the floor in order to give the crew a view downward.

Every bit of wall space was covered with dials, switches, and gadgets. Chow rubbed his eyes. "Say, you'll need a crew the size of a trail-drive to push an' pull all those buttons an' levers."

Tom smiled. "Chow, this is so simply arranged and computer-assisted that the Sky Queen could almost fly itself."

The cook, utterly amazed, shook his head.

"Since this here's a flyin' lab, where's the lab part?"

"Mid-fuselage. It's partitioned off from the rest of the ship and is a soundproof, air-conditioned room, or series of rooms. One's my physics lab, another's for chemistry. Then there's a place for experiments with animals—"

"Hold on!" Chow begged. "We goin' to carry a zoo along?"

Tom and Bud laughed. "Just wait!" said Bud.

Tom slid back the door and switched on a light. The large room, still under construction, was partitioned off into cubicles with walls shoulder high. Chow gazed in awe at the physics division with its six-foot electron microscope and x-ray, ultraviolet, and infrared absorption apparatus.

He shook his head. "Mighty fine," he said, "but it's beyond me. I'll stick to my galley. Where is it?"

Tom chuckled at the cook's impatience as he led the way up to the third deck. Forward was a comfortable windowed lounge, complete with easy chairs, sofas, and a small library of scientific books and magazines. Back of this were the sleeping quarters, and in the rear was the galley. Chow surveyed the layout of modern equipment in pleased astonishment.

"Wa-aal, brand my skillet!" he said. "Will I cook up some fancy dishes up there in the stratter-sphere!"

He was about to inspect his new domain when the ship intercom crackled on an override-link to the exterior. "Tom! Tom! Come to the hangar security office! Quick!" The anxious voice belonged to Tom's father!

## CHAPTER 3

### SYMBOLS FROM SPACE

TOM RACED down the stairways and ladder and across the concrete floor to the hangar office where his father stood with his hand on the monitor console for the secondary radar-scope.

"What's up, Dad?" Tom cried as Bud came clattering up behind him.

"Our security radar equipment—it's been disabled!" Mr. Swift exclaimed. "And look at the backup printout. An intruder was registered at 4:19 this morning!"

Bud whistled. "Hours ago!"

"Someone without an amulet broke in here?" Tom cried incredulously.

Mr. Swift's face was stern. "Yes. And according to the time imprint, someone who was looking around for five minutes before he cut the radar apparatus. We didn't know the system was out until just now, when I double-checked it to see if I could discover why the projectile hadn't been detected. No telling how long he was here after that, nor what it was he wanted."

"He's not hiding aboard the Flying Lab," Tom remarked. "We've just been through the

parts an outsider could get into. Say, it's funny no one reported a dot on the other radarscope, the main one. Maybe the intruder's still around!"

Mr. Swift immediately contacted Harlan Ames on his televoc to initiate a plantwide search and have the security alert announced to all the employees.

"I think he'll have a harder time getting out than he did getting in," remarked Mr. Swift after breaking contact with Ames.

Bud Barclay suddenly let out a cry. "Tom, we left the Skeeter on the test helipad beyond the runways!"

Tom groaned. "The ground crew wouldn't have hangared it yet." Tom and Bud had taken the craft on a short test flight just before noon, prior to the lecture in town. "If that guy can fly, he may try to get away in it! I've got to—"

But before Tom could raise his foot, Bud had already bolted out the hangar door and was sprinting toward the trees beyond the main airfield. An excellent football and track man in high school, he covered the distance in record time, leaping over the sidewalks as if they were competition hurdles. As Bud entered the untended, wooded field that bordered the runways, an engine throbbed to life some distance ahead of him. Between the scraggly trees he could see the Skeeter. Her rotor blades were beginning to turn!

"That's got to be our guy," he thought, desperately redoubling his speed.

With a frantic thrust of energy, he burst onto the paved test helipad. The new chopper was just taking off. Bud made a dash for the Skeeter, trying to grasp the edge of the still-open cockpit door and pull himself up before it rose out of reach, but he missed by inches. Nevertheless, he got a good look at the dark, slick-haired pilot. Then the helicopter rose and swung out of sight over the trees.

"He can't get away with this!" Bud set his jaw. Dashing back to where Tom and his father waited in the hangar office, he gasped out breathlessly, "He stole the Skeeter! But I'll take up a jet and try to force him down!"

"I'll go with you!" Tom exclaimed.

"Hold on!" Mr. Swift warned him. "There's no need to go charging into danger. We'll send out some of our Enterprises pilots for a search by jet. I'll alert the local commercial airports, too."

Tom frowned, his reluctance showing on his face. "Did you get a good look at him, Bud?"

"I sure did!" Bud replied. "Thin, dark, short. About twenty-five. Had black greasy-looking hair and eyes like a rat."

"That's enough to get the professionals started. Besides, son," said Mr. Swift, his eyes twinkling, "you don't want to miss RobiTec's trip down the rabbit-hole, do you?" He knew Tom would rather be in on a scientific discovery than almost anything in the world.

Soon Mr. Swift, Bud, and Tom had gathered in Mr. Swift's private laboratory suite next to his office. A monitor and remote-control setup had been wheeled in.

"Hey, hold on, hold on!" came the voice of Chow Winkler as the rotund cook came bobbing into the lab. "Brand my shootin' stars, you gotta let me take a gander too

—'specially after the way you boys ran off an' let me find my own way out o' that big plane!" Harlan Ames also joined them, but Mr. Swift decided not to admit any others. The robot-mobile was deposited at the edge of the fissure by a small utility truck. On the video screen, the onlookers could see RobiTec waiting motionless, captured by one of the runway cameras. About the size of a large lawnmower, the machine had four flexible tank-tread "feet," retractable tubular arms of various sizes and shapes, and a boxlike framework, outfitted with various sensors and intake vents, as its "head."

Mr. Swift touched the controls, and the image on the monitor changed to the view through RobiTec's camera eyes. "Here we go!" he said, easing the control joystick forward. RobiTec responded instantly, rolling over the edge of the ditch without difficulty and rapidly making its way forward to the large crater.

Tom switched to the onboard forward cameras. "There's the tunnel entrance up ahead," he observed. "Look how smooth the sides are! What's the temperature of those walls, Dad?"

"Only 130 degrees Fahrenheit now, and falling rapidly," said Mr. Swift, checking RobiTec's sensors.

"Great coyotes, my cookstove gets hotter'n that!" Chow remarked.

As RobiTec entered the tunnel, Mr. Swift slowed the machine and switched on its high-intensity headlights. The image of the interior of the tunnel took on an eerie aspect as it crawled by on the monitor screen. Tom periodically read aloud the positional readout. "We're almost 250 feet along the tunnel," he said wonderingly, "and a good thirty feet below ground level."

"According to the forward radar, we're approaching the end of the tunnel," Mr. Swift interjected. "We should be seeing—"

Bud interrupted him with an excited cry. "There!"

The monitor showed a streamlined cy-lindrical object protruding from the tunnel wall ahead!

"No way that thing's a meteor," Harlan Ames commented grimly. "I'd say you Swifts have an enemy at large with access to high-tech weaponry."

"Harlan, we don't know it's a weapon," Tom retorted as Mr. Swift brought RobiTec to a stop. "Think of the way it came down, its flight path. It managed to avoid our buildings, our people, even our runways—as if its purpose was to demonstrate that it didn't have any hostile intention."

"What do you think it is, boss?" asked Chow in a low voice.

Mr. Swift answered on behalf of his son. "I think we must consider the possibility that this device is of extraterrestrial origin."

Chow was thunderstruck. "Whoa! You mean there's little space people in that thing?"

Tom had to smile. "Not likely, Chow. This is probably some kind of automated probe.

You know," he continued thoughtfully, "my great-grandfather, the first Tom Swift, reported some indications of a space civilization. But he wasn't believed. This could be our chance to show he was right after all!"

"It would also be the greatest scientific discovery in the—" began Mr. Swift. Tom

suddenly gasped and leaned forward, grabbing RobiTec's joystick control.

"Take a look at that!" exclaimed Tom, playing RobiTec's headlights up and down the sides of the cylinder while enhancing the image resolution on the monitor.

A weird pattern of symbols was etched into the metal!

"What is it?" Harlan Ames asked softly. "Decoration?"

"It could be almost anything," replied Tom in hushed tones. "Even part of the missile's guidance system, like a printed circuit."

"No doubt we're all thinking the same thing," declared Damon Swift. He removed his glasses and rubbed his eyes. "Those symbols are a form of writing."

The pattern made little sense to the naked eye. There appeared to be dozens of symbols, arranged in a spreading circular pattern that resembled a sunburst. Zooming in on a small area, Tom saw that most of the individual symbols were small and fairly simple in design—ovals, triangles, criss-cross figures, and rows of interlaced circles. But some of the other figures resembled Greek or Hebrew lettering, or even Chinese characters.

"How could we even begin to translate a totally alien language?" muttered Mr. Swift.

"Why, shucks, it don't look that hard t'me!" Chow exclaimed. He touched one of the symbols on the screen with his finger. "Lookit that one, f'rinstance. That means the sun, and this one here means 'water falling from clouds'."

Tom's brow furrowed. "Chow, how in or out of the world could you—"

"Cause I know how people think, boss. Those things look like whatcha call Injun signs, or mebbe cattle brands from different ranches. I been seein' stuff like that all my life."

"That's as good a lead as any," said Tom ruefully. "After all, these 'space people,' if that's what they are, must have guided the missile here in order to communicate with our species. Maybe they understand how we think, at least a little."

"What I think is that these symbols represent mathematical concepts which might parallel concepts in natural language," Mr. Swift declared. "Mathematics is the universal language, after all."

"Hmmp!" snorted Chow. "Mebbe so, but I flunked arithmetic and I don't see's it held me back none!"

As Mr. Swift began to direct RobiTec to perform various tests on the outer shell of the missile prior to its being transported to a laboratory, Bud asked Ames, "Any reports on the Skeeter?"

"Nothing so far," replied the security chief. "The heli-jacker hasn't had time to make much distance, and it wouldn't be easy to hide the craft on the ground. But the search jets haven't seen a thing. Nothing from the police or the airports, either."

Tom turned very sober at the news. "I'm responsible for the loss, Bud," he said. "I should have had her locked away before leaving the plant."

"You're sure to get her back!" cried Bud. "Tom, that ship's a dream. She handles like a baby carriage—we proved it this morning. We can set her down on a dime and give back nine cents change!"

"I just hope it won't be long before we can do it again," Tom said disconsolately.

"What I'd like to know is why that thief was snooping around here. Have you any idea,

Mr. Swift?" inquired Bud.

"Not offhand," he replied, "but it won't be difficult to find out if anything important is missing. I have a feeling the best place to begin is the auxiliary test room in the underground hangar. Quite a lot of work related to the Sky Queen is stored there."

Stepping over to a control console, Mr. Swift remotely accessed the auxiliary lab's electronic inventory system. Every model, drawing, blueprint, or piece of equipment was tagged with a snippet of transponder tape, allowing the ceiling-mounted detector unit to determine if anything had failed to "report in." It took only a moment for the answer to appear on the monitor screen.

"Here it is," he said grimly. "The drawings and specifications for our 'super-Geiger counter' are gone, Tom. Now we know what the thief was after!"

## CHAPTER 4

### A SCIENTIFIC THIEF

"Wait a minute!" exclaimed Tom.

Tom hurried across the room and keyed his personal code onto a button-pad on the top of a metal cabinet. The bottom drawer slid silently open in response and a smile of relief spread over Tom's face. "Only half of the plans are gone, Dad. I put the others in here yesterday with the miniature model."

Bud burst into laughter. "What a surprise the Pomade Kid's going to get!" Then he became serious. "What I can't understand is how he got into the underground hangar in the first place—not to mention the auxiliary lab. He'd need a special key, wouldn't he?"

"You're right—one of our electronic beeper-keys." Tom looked meaningfully at his father. "Do you think it might have been an inside job? Or a job with inside help?"

"That might account for his not being detected by the main radar unit," Bud suggested.

"One of the plant workers might have disconnected it momentarily, then let his confederate in."

"I hate to be suspicious of anyone here," Mr. Swift remarked, "but I suppose we'd better consider every angle. Right now, though, we'd better make sure that projectile is moved to a secure—"

He was interrupted by a knock on the door. Tom, quickly blanking-out the monitor, rose and went to see who the caller might be. "Arthur Roberts is here," he announced over his shoulder to Mr. Swift. Roberts had worked for many years at the Swift plant as a tool designer. The close, exacting skill had proved too great a strain on his eyes. As a result, he had been assigned the duty of night watchman for the underground hangar and laboratory.

"Tell him to come in," said Mr. Swift, as Chow and Harlan Ames left quietly. Tom tapped Bud on the shoulder, asking him to remain.

The moment the man appeared in the doorway, the three in the office knew something was wrong. Roberts's face was pale and drawn, and there were dark circles of distress under his eyes. As he removed his cap slowly, they noted that his hand shook a little.

"Yes, Roberts?" Mr. Swift said. The man cleared his throat, then spoke gravely. "I have

something to confess. I'm responsible for the theft of the super-Geiger-counter plans." Tom and his father stared at the man in astonishment.

"But you've been with us for years!" declared Damon Swift. "You're one of our most trusted men."

Roberts looked down at the floor. "I know. But I couldn't help what happened."

"Tell us everything," Tom urged, a gentle tone in his voice.

"Last night—actually early this morning," the guard began, "I had just unlocked the door to the underground hangar to make my hourly rounds when a strange man came up to me. He matches the description being circulated of the one who stole Tom's helicopter. I don't know how he got in—anyhow, it wasn't by the main gate. He said he was a research member of Hemispak."

"Hemispak!" Mr. Swift cried. "The group formed to pool scientific information and resources for the protection of the natural environment in the Western Hemisphere!"

"I know how important Hemispak is, so I asked what he wanted," Roberts went on. "He mumbled something. And then—he pulled a gun. He started talking tough, said he'd been briefed on me. He even knew about my son Barry being in South America. You know, Barry's a chemist there, and his work is for Hemispak." Roberts lowered his voice. "Looking for uranium, I believe. That fellow said both Barry and his wife would be tortured if I didn't tell him where to find the plans for your new detector machine."

Mr. Swift nodded with understanding. "And you did?"

"I had no choice."

"So you took him to the underground lab?" asked Tom.

Roberts gulped and nodded. "The man had some little electrical gizmo that allowed him to unlock the storage cabinet. He rummaged several minutes until he found the plans, waving that gun my way the whole time. I wish now I'd jumped him, but you know my eyes aren't so good anymore."

"Then what?" Bud asked.

"All I know is, he pulled something out of his coat pocket. It was a spray can, like those little cans of pepper-spray, you know? He sprayed me in the face, and then—my wife Dolores says I came home and crawled into bed at 6 A.M., but I don't remember a thing about it. I slept just like normal. In fact, I must've been in a daze or something, because it wasn't till I clocked in just a while ago that I remembered anything about the incident!"

"Instant concussion," said Tom in a wry voice. "Science marches on!"

Roberts sighed. "There's something else I should tell you. I wrote to Barry about your device, which the two of you used to work on at night and discuss while I was making my rounds. I didn't really realize that I shouldn't. Someone must have intercepted the letter and opened it. Maybe Barry is being watched!"

"That seems likely. And—he works for Hemispak." Mr. Swift put a reassuring hand on Roberts's shoulder. "Don't worry about this, Roberts. But I'd suggest that you contact your son immediately and warn him. I think Harlan Ames can get you authorization to use the secure line to whichever American Embassy is closest to him. If this is the work

of some enemy group, they may carry out the threat against your family."

Roberts thanked his employer and hurried off. Left alone, the others exchanged worried glances.

"I didn't want to make Mr. Roberts feel any worse," said Tom, "but I think I can guess how the intruder got onto the grounds. He probably hitched a ride inside Roberts's trunk!"

Bud nodded. "I thought the same thing. We count so much on the radar system to track outsiders that we don't make too big a deal about controlling entry. And if he had his own radar-trapping device—"

"He'd be home free," finished Tom.

"It's clear that the intruder—or his employer—is a scientist and a dangerous enemy," said Mr. Swift. "Evidently his antiradar setup was tuned to the master plant radarscope in the airfield tower. He wasn't prepared for the secondary unit in the hangar, and all he could do was physically disable it. That's why we see his blip for a few minutes on the time recording."

"Man, would I like to get my hands on that oily-haired sneak!" Bud burst out. The copilot's big shoulders strained at the seams of his heavy ribbed sweater. "I'd do a job on him!"

"I wouldn't mind getting a whack at him myself!" Tom's lean, strong hands clenched unconsciously.

Mr. Swift put a calming hand on his son's arm.

At this moment the interoffice phone rang. Tom picked it up, on the speaker setting.

"Your sister is at the main gate, Tom," Munford Trent, the Swifts' private secretary, informed him. "Sandy says something has happened. You're to come out there at once!"

Bud was out the door almost before Tom was able to set down the phone receiver. Since his arrival in Shopton a few years before from San Francisco, where his parents made their home, Bud Barclay and Sandra Swift had become close friends, making Tom's younger sister the envy of many in town.

The two boys hurried through the grounds, wondering what Sandy was about to tell them. The attractive blond girl, a year younger than her brother, resembled him in looks and disposition.

The boys found Sandy astride her horse, Jumper. His glossy coat was drenched with sweat from a hard run, and he was prancing about nervously. His owner, too, appeared to be excited. "What's up?" Tom asked, alarmed.

"Something awful happened a little while ago," Sandy burst out. "I was riding Jumper along Old Mill Pond Road when a copter that looked just like that model you showed me came down right in front of me!"

Tom and Bud looked at each other, speechless. The stolen aircraft!

"The pilot let it roll under some big willow trees," Sandy went on. "and then came tearing out into the middle of the road. He gave me a fearful scare. Ran right up to me and grabbed Jumper's bridle! But just then a farm truck came along. The pilot pulled out a gun and forced the driver to stop. He yelled to me not to dare tell anyone I'd seen him.

I—I think he knew who I was, somehow. Then he climbed into the truck and made the driver start up again."

"He stole that copter from us!" Tom said, and quickly told Sandy the story of the theft.

"We've got to get over there before they truck it away!"

"And it may have some clues for us," added Bud. "Sandy, are you all right?"

"Oh, I'm fine," she responded. "I'm a Swift! But do be careful," she begged them. "That man has such a wicked face."

"Don't worry," Tom answered. "But there's no time to lose, Bud. Come on!"

## CHAPTER 5

### A CALL TO DANGER

FIFTEEN MINUTES later, in the fading light of early evening, Tom and Bud pulled up in Bud's car at the spot where the midget helicopter had been abandoned. It was well screened in a willow grove near a brook.

"No wonder our search planes couldn't see it from the air," Bud grumbled as he leapt the door. "The way those willow branches hang down, it might as well be draped with curtains."

The boys rolled out the Skeeter and Tom climbed in. A few minutes later he called down that apparently the thief had not meddled with the controls.

"I'll fly it back," he said, gunning the engine. "See you at the plant."

With Bud driving far below, Tom gave the agile little craft a good wringing out to be sure that the strange pilot had not tampered with any part of it. When Tom came down at the main Swift Enterprises helipad, he found Sandy waiting for him.

"I'm so glad you got the copter back from that creepy geek," she said.

"So am I, sis. That squares up one of the thefts. But maybe you shouldn't ride around alone on country roads any more—Swift or not."

"You bet I won't," she promised. "At least, not until they catch that two-bit gunslinger!"

Making a quick call to Harlan Ames and then to the local police, Tom was informed by the police captain that he had already heard the story from the driver of the hijacked truck and had sent out an alarm. Tom then televoc'd his father and Bud, who had just arrived back at the plant, relaying the news.

"I think it's time you three went home for some supper," suggested Mr. Swift. "It's been an incredibly eventful day. Some of Ames's men will follow behind you to make sure you get there all right, and I've already had some plainclothes guards posted around the house."

"How about you, Dad?"

"Oh, I'll be along. I've been fielding inquiries from the news media about the 'meteor' that struck Swift Enterprises. After what happened to your great-grandfather, I think I owe it to the family to be a little cautious about releasing news that the public might find too sensational."

"But I know you don't want to lie," Tom commented.

"No indeed," agreed Mr. Swift. "But listen, Tom, our first analysis indicates that the

projectile is composed of some unknown silicate composite, not metal."

"Silicate? Like rock?"

"Precisely. So my press release will state that 'a rocklike mass traveling at unusually high speed impacted within the grounds of Swift Enterprises. Swift scientists are now studying it to determine its specific composition.'"

Tom laughed heartily. "And that's no lie!"

Several days went by and still there was no trace of the thief. Tom had plunged into work on the Flying Lab, overseeing countless precision jobs on which the crew's lives would depend once they were airborne. This did not keep him from pulling out of his pocket many times a day a copy of the symbols inscribed on the strange missile that had fallen from the sky. Solving the mysterious message it seemed to convey had become a game between Tom and his father, both of them aided at times by Enterprises mathematicians who assumed a new security encryption system was being tested. At dinner each evening they would compare notes about the results of their calculations.

"Any progress, Tom?" Mr. Swift finally asked one night, enjoying their friendly contest. Just that day Tom had computed the ratio of the diameters of two oval symbols, one smaller than the other, and concluded that the larger oval was meant to be Earth, the smaller one her neighboring planet Mars. The message could be from Martian scientists!

"Yes, Dad, I have one theory," Tom replied. "Those two overlapping circular shapes—they work out mathematically to represent this planet and Mars, encoding the difference between the polar and equatorial diameters."

"I came to the same conclusion through an entirely different chain of reasoning. At least we know that 'somebody up there' is trying to get an important message across to us."

Mr. Swift laughed. "Well, we're still running neck and neck in our race."

"I wish I had more time to work on the symbols," Tom continued. "But I'll keep at them until we take off for the ionosphere."

Late one morning, after Tom had finished stowing some delicate instruments aboard the Sky Queen, he decided to check the blueprint of the gyrostabilizer caissons. He hurried down to the office and studied the detailed sheet a few moments. Some wiring would have to be changed to avert risk of fire.

As Tom came from the office, he stopped short. Looking up, he was horrified to see wisps of smoke curling from the air vents of the Flying Lab, just as he had imagined! Visions of disaster flashed through his mind.

"But it's coming from the third deck," he observed. "It can't be that wiring." Grabbing a fire extinguisher, Tom leaped up the interior stairway of the plane. He ran head-on into a wide figure racing downward.

"Chow! What's on fire?" The chef was coughing and choking as he tried to find his way down the steps, his eyes streaming with tears from the smoke.

"Lemme out!"

"Is it the galley?"

"Galley? Naw, boss, th' galley's not on fire. It's jest my Texas spinach omelet. Consarn, with all them microwave ovens an' in-duction thingums it's a wonder I kin find my

skillet!" Chow was obviously perturbed—and more than a little embarrassed.

"I know it's a little different," Tom said sympathetically, trying hard not to laugh. "But you know, we can't exactly have an open campfire on the Flying Lab, not with the oxygen-rich air we'll be breathing onboard when we're cruising the upper atmosphere."

"Waal, if you say so," returned the cook. "But don't come complainin' if'n your bacon strips look more like brown shoelaces!"

Tom gave Chow's shoulder a squeeze. "If anyone can tame that loco galley, it's you, Chow."

At this Chow gave the inventor a determined look, still coughing because of the smoke in his lungs. "I broke tougher broncos n'that, I guess," he declared. "I was goin' to surprise you for lunch, but I'll fix somethin' else."

"A he-man steakburger, please," Tom begged. "And easy on the surprises."

After lunch aboard the Sky Queen, Tom ridewalked over to the office which he and Mr. Swift shared in the main building. His father was there and said, "Roberts just had a message from his son's wife, via the secure link from the US Embassy in Lima, Peru. Young Roberts has gone into the mountains by helicopter on an expedition with a group of Hemispak scientists. He left several weeks ago, and she doesn't expect to hear from him until he returns. I hope nothing happens to him."

Mr. Swift had barely conveyed this news when the intercom phone buzzed. "There is someone at the gate to see you and your son," said Trent.

"We're very busy," answered Tom's father, somewhat annoyed. "You know when I'm—" "I'm sorry, Mr. Swift. But I believe you'll want see this man right away. He says he's from the Hemispak Scientific Society!" Across the office, Tom and his father looked at each other in amazement. From Hemispak! Could this be the same man who attacked Roberts? Would he dare take the chance to come here again? "Bring him in!" Mr. Swift told the secretary.

Before the visitor arrived, Tom pushed a button and the broad workbench, covered with plans and gadgets, slid into the wall out of sight. "We'd better watch him, Dad! Even if he isn't the same man, he may be a crony of his. I think we'd better keep him between us while he's in here."

"Good idea, Tom," said Damon Swift. "And we can also have plant security listening-in by means of your televoc pin."

"Señor Carlos Rigoledo," Mr. Trent announced presently, ushering the caller in. Tom knew at once that he was not the man who Bud had described. The caller was much older and less agile-looking.

"May I present my credentials, gentlemen?" the stranger said after the Swifts had introduced themselves. "Although the selection has not yet been released to the press, I am the newly chosen president of the Hemispak Scientific Society." He pulled out a membership card and letters from a pocket to support his claim. The Swifts examined them and felt satisfied.

"We have heard a great deal about Swift Enterprises," Señor Rigoledo began. "Hemispak hopes to work side by side with you two famous Swifts."

"If Hemispak is all we've heard it is," Mr. Swift replied, "that would be a distinct privilege for us." His suspicions, as well as Tom's, had been completely dispelled by the stranger's straightforward manner.

"We have a great deal of work to do," went on Señor Rigoledo, "but if we can maintain our ideals of co-operative scientific work in behalf of the northern and southern continents of America, the western hemisphere should benefit greatly."

The trio now relaxed in friendly, companionable conversation.

"Some day I'd like to visit South America again," Tom remarked. He did not say so, but in his mind he finished: "—and in the Sky Queen would be the perfect way to do it!"

"That may be sooner than you think," was the surprising answer. "Your reputation, for one so young, is already widely known among our people through the scientific and engineering journals. And that is part of my reason for coming to Swift Enterprises today."

Tom sat up expectantly.

"I must now acquaint you with certain facts," Señor Rigoledo remarked, "facts that you may be somewhat familiar with through the news reports. I am the Deputy Minister of the Interior of my country, Montaguaya. Perhaps you know that we have been having trouble with a certain group of our people, the Puyachay. They are an ancient indigenous people who live, for the most part, in one area of the eastern Andes mountains and the jungles beyond, the province of Veranos-Estrella. The Puyachay are a very stubborn people, one might say, and do not care to change their ancient ways. Verano, as they call it, is really a splinter state, run by rebels who broke away from the mother country. They carry out continual guerrilla war-fare against us."

Verano, Señor Rigoledo revealed, was a stumbling block to the work of Hemispak.

"Why is that?" Tom asked.

"I will explain. As you know, the United Nations has imposed certain restrictions on the mining and export of fissile radioactive ores—materials used in the production of nuclear reaction. If a nation appears to be engaged in undisclosed mining operations or illegal trafficking, various sanctions are imposed," he went on. "Regrettably, my country of Montaguaya is now subject to those sanctions, because we cannot guarantee that the Verano rebels are not engaged in these prohibited operations."

Mr. Swift looked at Rigoledo thoughtfully. "I take it you have reason to believe that the rebels are dealing in ore?"

"Si, Mr. Swift. From a clue given by a defector from the rebel forces, we believe that there is valuable radioactive material within the borders of Verano. We think some exploratory mining has been done, and that they are using small samples to seek covert funding for a larger operation. But such materials must never fall into the hands of these rebels!"

"But do they really have the technology to do anything with it?" Tom felt the visitor's story was somehow incomplete.

"They would sell it to a power hostile to the United States—and to Montaguaya as well. This we must prevent."

"These rebels—they must be more than ordinary guerillas," Mr. Swift remarked.

"I shall say only that they are cruel, ruthless men, as were their ancestors five centuries ago," Señor Rigoledo went on, passionately. "Hemispak sent an expedition of scientists to survey the border from the air, with instruments for the detection of uranium. But we fear they have met with foul play from the rebels. It has been two weeks since we have heard from them by radio."

Tom sat bolt upright, exchanging alarmed glances with his father. "That's probably the same expedition Barry is with!" he cried.

"What? You are acquainted with Barry Roberts?" Rigoledo asked in surprise. "He is one of Hemispak's finest scientists."

After Mr. Swift explained how they knew him, Señor Rigoledo said, "Ah me, then this is indeed bad news. Do not mention my worries to the father and mother if you please, as all is uncertain for now."

Mr. Swift agreed, a frown creasing his forehead. Rigoledo continued, "They are good men, our scientific party, and it is at least very strange that we have had no word from them in so long a time. At this moment, as we speak here, those rebels may be forcing Roberts and the others to locate the uranium for them!"

"But you don't think the scientists will do it?" Tom said.

Señor Rigoledo waved his hands in a gesture of despair. "How long can they hold out? A man has his limits." He leaned forward in his chair. "It all leads up to a very important question which I am about to ask you, on behalf of my government and Hemispak.

"Will you and your father help us thwart these dangerous rebels?"

## CHAPTER 6

### ENEMIES BELOW!

TOM'S EYES gleamed with eagerness as he waited a moment for his father's reply to the South American's question. This could be a high adventure!

"But how can we help you and your country, Señor Rigoledo?" Tom could sense that his father was moved, yet uncertain. "We're not diplomats. These are matters for governments to resolve."

Rigoledo nodded his understanding. "Indeed so. And as you understand from my documents of introduction, I myself have held many positions in the government of Montaguaya. Sometimes, you see, governments must be willing to operate outside the usual channels."

"Yes," said the elder Swift brusquely, "and outside the public eye. It seems we could help you locate the rebels and their captives—and watch your army come in with guns blazing, wiping out everyone!"

Rigoledo's face flushed. He rose from his chair and regarded Damon Swift coldly. "I can see you know little about the history of the Montaguaya situation. My government is one of South America's oldest democracies. Year after year we have been attacked, our citizens killed—yet we show restraint. We conduct ourselves with honor!"

He removed from his coat pocket two small white cards and slapped them down on the

desk. "My residence in America. I shall be here for five days. The other card is the private office number of Dr. Harold Tennyson, a trusted senior official in your State Department. He will vouch for me. If his word is not enough for you—there is nothing more to say."

"Please, Señor Rigoledo," said Mr. Swift in a calming tone of voice. "Allow me to withdraw my ill-chosen words. Your request is obviously made with great sincerity. And it seems we are already involved."

Rigoledo smiled so readily that Tom wondered if his indignation had been more act than reality. "We need the help of you Swifts and your wonderful inventions," continued Señor Rigoledo as he pressed his case, "both to locate our missing scientists and to investigate the presence of uranium deposits."

"I'd like to do it!" Tom exclaimed, no longer able to hold back. "It would be the perfect field test for the Flying Lab!"

Mr. Swift, still cautious, asked whether the Montaguayan government had tried to find the scientists.

"Yes, but we have not succeeded," the South American replied. "We believe the involvement of Americans would give pause to the rebels, if you see. After all, our children learn about the first Tom Swift in their schools!"

Tom was more eager than ever to go. He wanted go rescue Barry Roberts before the man might be tortured into working for the rebels!

"You've made an eloquent case," Mr. Swift said. "We'll give you a formal answer before your departure. But you should know that the new aircraft and its instruments will not be ready for another two weeks or so. In that time a lot can happen in Verano."

"Es verdad! It is true!" their caller agreed. "I will keep you informed, of course. But I am sure our scientists will not give in to the rebels and help them find the uranium before then. They will hold out as long as they can."

"You mean, they won't give in until they're forced to," said Tom.

Rigoledo nodded. "I shudder to think of those five scientists being tortured into helping the enemy. And now, I should take my leave of you."

As they shook hands all around, Tom said, "Whatever we decide for the moment, I know the Sky Queen will someday pay a visit to your country and help your people safely develop their resources."

"Ah, the enthusiasm of youth!" Rigoledo beamed. "Magnifico! And now, if I may humble myself, there is perhaps just one thing more. Before I go, I should like to see this Flying Lab you praise like the angels!"

Mr. Swift glanced at Tom, as if to say, It's up to you. Tom felt that the Flying Lab was not ready to be exhibited. However, because of Rigoledo's governmental position and the scientific renown of Hemispak, the young inventor decided to give him a preview of the giant skyship.

In the hangar Rigoledo's reaction was both amazing and amusing. After his first voluble praise, he seemed at a loss for words. But finally he murmured: "It is esplendido! But now I must leave."

As the Swifts walked to the main gate with him, he remarked, "Ah, I see over there the big hole from the meteor. We read about it even in Cristobal, our capital city. You know," Rigoledo added, "even scientists can be great gossips."

"What do you mean?" asked Tom.

"A silly rumor," the man replied, pausing inside the gate. "Somehow it goes around that this was not a meteor at all, but something mysterious—a machine! Bah! But it is amusing."

Tom and his father were thunderstruck! But they took care not to react until their visitor was out of sight.

"How could the news have gotten out?" Tom shook his head in frustrated disbelief.

"People always speculate," his father replied. "It may be no more than that. Or it may be that one of the employees who was nearby while RobiTec was 'sniffing' couldn't resist dropping hints here and there, despite our instructions."

"I suppose there's no use fretting about it," Tom said. "Besides, I'll bet we crack the space code before we take off, and then we can release the data to the world."

Tom gave his father a sly look, and Mr. Swift chuckled. They both knew that the decision had been made. Barring some unforeseen development, the Sky Queen would soon be heading south into adventure—and danger!

Realizing that all aspects of work would have to be sped up, the two went their separate ways to their individual projects. As Tom neared the underground hangar, he met Chow. "Jumping sunspots!" Tom exclaimed as the good-natured cook approached, wearing a purple and orange plaid shirt.

"You like it, eh?" Chow asked.

"It's enough to start a stampede."

"Well, I dunno, boss. Steers cain't see color, kin they?" Chow replied, scratching his almost-bald head.

During the next two days, father and son applied themselves rigorously to a demanding and accelerated schedule of work. After a conference call between Harlan Ames and Mr. Swift at one end and Harold Tennyson in Washington D.C. at the other, Señor Rigoledo was informed that the project for the Montaguaya government was "go."

"On behalf of my country, my people, and the Hemispak organization, I humbly thank you," he said. "I shall depart for Cristobal at once."

The next morning at breakfast Mr. Swift said he was eager to start for his office to work with Tom and the Enterprises electronics team on the new super-Geiger counter. He asked Tom if he was ready to go.

"I promised Uncle Jake," Tom replied, "that I'd give the Pigeon Special a good workout this morning. He's about ready to announce the new commuter plane to the public and wants me to see whether I can set it down in somebody's driveway. I don't really have the time, but it shouldn't take long."

Bud Barclay had breakfasted with the Swifts, as he often did. In most ways, Bud was like a member of the family, and Mr. and Mrs. Swift treated him like their second son. Now Bud spoke up.

"Listen, Tom, you're needed to help your Dad. I know all about that new miniplane Swift Construction's come up with. Let me put it through its paces," he urged. "I've been ground-bound way too long."

"Oh, Bud, no one loves to fly more than you do," observed Mrs. Swift. "I think you must have been born a mile in the air."

Sandy, who was an excellent pilot, asked if she might fly with Bud, saying that she hoped some day to demonstrate the plane herself to prospective customers.

"Sure. Go along," Tom said. Bud gave him a look of gratitude. "You can take the Pigeon up and do a few stunts. Bud'll bring her down."

Twenty minutes later Bud and Sandy were within the gates of the old Swift Construction Company. Founded by Barton Swift and his famous son, the large facility was now a testing and development center for Swift consumer products, including aircraft. Jake Aturian, a trusted friend of Mr. Swift, was in charge.

Mechanics rolled out the tiny propeller-driven two-seater, which had stubby wings that curved upward over the top of the fuselage and joined together, forming a flattened hoop. Adapting some unconventional design principles, the Pigeon Special line boasted the ability to take off and land safely in remarkably short and narrow spaces. Ordinary runways would not be required.

Sandy took it up in a long, graceful arc. "You're doing real well, San," Bud complimented her, after she had skillfully executed a series of S-turns without air-skidding. "Try some simple stunts. But you'd better get more altitude first," he warned her. "Never do acrobatics with a ship too close to the ground!"

Sandy immediately eased back on the stick, and the small plane quickly rose another thousand feet.

"Here goes a loop." Then, mimicking her brother's voice, she said, "You fly straight and level as you start, then dive a little to pick up speed, and give it some left rudder. As you climb into the loop you add throttle, and at the top of the loop you ease the throttle back."

Bud grinned as the Pigeon whipped up and over in a creditable loop.

"Now you're ready to try a barrel roll," he said, half teasing.

Sandy puckered her lip, then said, "Budworth, a barrel roll is just a simple turn. Except that you keep the ship turning until it's upside down and back again. And since I'll talk myself out of it if I think about it one more second, here goes!"

"Wait a minute!" Bud ordered. "Pull the stick back until the nose is just above the horizon. Then use—"

But Sandy had pulled the stick back too far, and the Pigeon began to lose flying speed rapidly. As she moved the stick to the right, the plane vibrated, then stalled, and plunged earthward in a buffeting spin. Sandy caught her breath.

"I have it," Bud said quietly. He kicked in the right rudder, snapped the stick forward, and came out of the spin in a long dive with five hundred feet to spare. Then he used the speed of his dive to regain most of the altitude lost.

Sandy let out a sigh of relief. "I think I've rolled enough barrels for one day," she said.

"No, girl, that's not how it works," Bud told her with a smile that looked unrelenting. "Try it again right now, or you'll be spooked for life. Just don't pull the nose up so far that you lose all of your flying speed. Now go ahead."

This time the roll was perfectly timed, and Sandy's confidence was restored.

"I'll take over now," her friend said. "She performs beautifully, doesn't she? I wonder just how small a spot I can set the Pigeon down in!"

Using the standard approach pattern to the field, Bud eased in over the countryside.

Gently the plane nosed down, until it was only six hundred feet above a small wooded area on one side of the field. It was able to move through the air so slowly and lightly that it almost seemed to be floating on the breeze, like thistledown.

Suddenly there was a terrific impact against the bottom of the fuselage. Something ripped through the floor, whizzed upward between them, and passed through the roof of the cockpit. The Pigeon gave a tremendous lurch.

"Someone's firing at us!" Bud shouted.

## CHAPTER 7

### CRITICAL TEST

"WE'LL have to crash land, Sandy! Hang on!"

Only the fact that Bud Barclay was an experienced pilot prevented a bad crack-up. As it was, he leveled off just in time to pancake to the runway without disaster.

There was a sickening screech as the damaged undercarriage was ripped away, but the ill-fated plane skidded to a stop. Bud and Sandy sat in stunned silence a couple of seconds. Then he said:

"Are you all right, Sandy?"

"I think so. A few aches and pains. But don't worry, Buddo—I won't sue you for pilot malpractice." Bud was relieved that Sandy could joke despite the fear in her voice.

"How about you?"

"I'm okay."

With shaking fingers Sandy unfastened her safety belt and slipped out of the seat. Bud helped her from the plane, which was listing over on its left wing, and they surveyed the damage.

"It could have been a lot worse," he said thankfully. "If that wasn't a deliberate attempt to kill us, I'm a bald eagle!"

"But why?" Sandy asked quaveringly. "By the same man who broke in to Enterprises?"

Bud shrugged. "At least by someone who doesn't want Tom to go to South America.

Remember, it was Tom who was supposed to take the Special up today!"

Two hours later, after Sandy had been taken back to the Swift residence, Tom finished a cursory examination of the Pigeon Special. The crumpled craft had been moved to a hangar at Swift Enterprises by flatbed truck.

"This is going to be hard to believe, Bud," said Tom, "but I think something along the lines of an anti-aircraft bazooka shot a micro-rocket at the plane."

"What!" Bud exclaimed, staring wide-eyed at the holes in the floor and ceiling of the

cabin. "If that thing had exploded—"

"The rocket launcher must have been in the woods," Tom declared. "Maybe a mobile, truck-mounted job."

Bud snorted. "By my arithmetic, that's two attacks on you and Enterprises by those rebels. And two too many!"

"It sure looks that way." Tom clenched his fists. "But when he shoots at Sandy—"

"Whatever you do to him, count me in on it," Bud growled. "Say, how do you figure they found out that you were going to test the Pigeon this morning?"

"I wish I knew," Tom said solemnly. "There must be a nest of spies around here."

"Well, for Pete's sake, watch your step!" Bud urged.

On the way to the administration building the boys talked of nothing else but the attack. And when Tom told his father about it, Mr. Swift looked grave.

"This is really cause for alarm," he said. "Until we get to the bottom of it, you must be extra cautious, Tom. Better report this incident to the police at once."

"I'll do that, Dad," Tom replied. "And I'll send a message to Mr. Rigoledo too, via the American embassy in Cristobal. All this may mean that the Verano rebels are getting restless!"

During the last several days, Mr. Swift had been working with Tom on the super-Geiger counter. He now announced his satisfaction with the result of a novel approach he had been trying.

"Tomorrow we'll take the model up in a plane and try it on some buried uranium," he said.

The following morning, after Tom had finished an inspection of the altimeters on the Flying Lab, he drove by electric cart to a spot far removed from the Swift Enterprises buildings. Here his father was directing some digging. Two workmen, operating a power boring drill, were sinking a hole deep in the ground.

"We're about ready to bury the uranium," Mr. Swift explained to Tom. "I think the hole's deep enough. They're down twenty feet now."

He walked over to where a heavy lead cylinder lay. The cylinder contained two curies of a naturally-occurring radioactive uranium isotope.

"All right, men, go ahead and lower the cylinder into the hole."

"Don't you want us to uncork her first, Mr. Swift?" asked the team lead.

"Absolutely not!" Damon Swift commanded. "The container is self-opening and will eject the material only upon receiving my coded signal. I don't want any of you within fifty yards of this 'hot' uranium even after you've got it covered with dirt."

When this was accomplished he turned to Tom. "We're ready, son."

"Okay. I'll head upstairs in the Skeeter," the young inventor responded. "Keep your fingers crossed!" He drove off toward the Skeeter's hangar, where the newly-redesigned detector had already been loaded aboard and secured.

"She's ready to go," the mechanic on duty told him. "Just tuned her up. The engines sound smooth an' fine."

"That's great, Vern," said Tom, noting the name on the mechanic's overalls. "Just as long

as nobody shoots bazookas at her!"

"Yeah," the mechanic replied, scratching his head. "I heard about that!"

In a matter of seconds the unique helicopter was airborne under the power of its pulse-jet rotors. Switching to horizontal flight mode, Tom climbed steeply and leveled off at two thousand feet.

"Let's try the counter at this low altitude first," came Mr. Swift's voice over Tom's televoc. "I've verified that the cylinder has ejected the uranium from the shielding."

Winging over the Swift Enterprises grounds, Tom eased the throttle. Presently the monotonous background hiss in Tom's headset was replaced by the high-pitched mix of tones that signified success.

"We've got a winner, Dad," Tom televoc'd.

"Well, at least it works!" Mr. Swift chuckled.

"Let's try it at five thousand feet," Tom suggested as he put the Skeeter into a steep climb.

At five thousand feet he leveled off once more, starting another run over the buried uranium. This time the detector tones came much less steadily and very weakly.

"But it's there!" murmured Tom as he tried to adjust the counter so that it would produce a more sensitive response. "But will it work at, say, ten thousand, where we'd normally be cruising?" He set his jaw. We may as well find out now, he thought.

He pulled the ship into another upward surge. When the altimeter read ten thousand feet, Tom leveled off and made another pass, but the device registered no sound other than the normal background hiss. Tom's face showed his keen disappointment. Even the improved super-Geiger counter lacked the power for long-range detection.

"Our invention probably wouldn't detect radioactive particles from deep-buried ore," he said to himself. "There must be some way to perfect the detector, though. Maybe an entirely new approach to the problem." His mind was already hard at work!

As Tom set the heliplane down in a feather-touch landing, he exclaimed to himself, "That's it—a new approach. We must throw out present-day methods."

Bounding from the cockpit, Tom dashed toward his father. "I have an idea! A completely new scheme!"

Tom's enthusiasm was infectious. By the end of the day, the office shared by Tom and his father was littered with drawings, plans, and calculations.

"It looks entirely plausible," commented Mr. Swift, looking over Tom's latest sketch.

"We'll have Arv Hanson's crew put together a mockup for testing." Arvid Hanson was chief of Enterprises' technical assembly department. His team of technicians were known for their ability to translate hasty blueprints and sketchwork into working test versions in a span of hours.

That evening, as the Swift family finished their supper, Tom and his father remained at the table discussing the events of the day. Eventually their conversation drifted around to the subject of the space symbol translation.

"I must admit, I've come to something of a dead end," said Mr. Swift. "Every segment seems to affect every other segment, and I no sooner feel I've solved one part than I find

it doesn't fit in with the rest."

"It's the same way with me," Tom agreed, pulling his small working notebook from his pocket. "The first group of symbols—if it is the first and not the end—might be saying 'we need data we can measure,' or something more like 'truth results from pure axioms'."

Mr. Swift nodded ruefully. "Yes, and I came up with 'all attainment reduces to mathematical function expressed through time'."

Tom grinned. "All of which sound more like fortune-cookie sayings than greetings from another planet."

Sandy had been lingering in the doorway, listening to the conversation. Now she stepped forward hesitantly.

"Dad... Tom..." she began. And then she paused.

"What's up, sis?" Tom asked.

"It's just—I had an idea about those attacks," said Sandy. "And please don't make fun of me, because I'm just observing that old Swift adage about following imagination after logic gives up. But I suppose you'll think I've watched too many TV reruns."

"Give us a try," said Tom reassuringly. "It's not as if we've made much progress on our own."

"Well," his sister continued, "you're all assuming the attacks have to do with what's going on in South America. But really, that's not the only possibility. I mean, couldn't they have to do with that space missile?"

Mr. Swift raised an eyebrow. "Are you suggesting our adversaries might be trying to find out about the missile, or even to steal it?"

Sandy shook her head vigorously.

"No, Dad. What I'm suggesting is—maybe it's the space people themselves who are behind the attacks!"

## CHAPTER 8

### SKY-TRACK RACERS

TOM AND MR. SWIFT were left speechless by Sandy's statement. The idea that the acts against them were being directed by beings on another world would have never occurred to them, despite the presence of an alien artifact in one of their own laboratories.

"But sis," protested Tom weakly, "you're forgetting that the first incident occurred the night before the missile came down."

"I know that," she agreed. "But what if there's a group of space people already on Earth? Maybe they look just like human beings, or maybe they have a way to make themselves look like us. Maybe the missile was an attempt by good aliens to warn us about the bad ones! So, see, the bad ones found out about it in advance and started trying to penetrate our defenses."

"Or maybe the missile was carrying something for the 'bad guys,' something they need—but it came down in the wrong place," Tom mused, glancing at his father. "They've

been trying to get inside Enterprises in order to be in place to take possession of it."

"I suppose it's possible," Mr. Swift commented. "We can't quite rule it out."

Sandy's face fell. "But it's not worth thinking about."

"Well, Sandy," said Tom with a joshing smile, "you had a run-in with Mr. Slicktop. You don't really think invaders from Mars would show up with bad haircuts, do you?"

Sandra Swift glared at her big brother. Then her expression turned sweet. "I'm sure I wouldn't know anything about bad haircuts, Tom dear." She turned and swept from the dining room, leaving Tom to contemplate how long it had been since he had seen a barber.

Arriving at Enterprises early the next morning, Tom was pleased to review a number of reports from the various work teams indicating that preparations for the departure of the Flying Lab were progressing ahead of schedule. All the workforce was dedicated to helping the Swifts startle the world once more with their amazing inventions. Noting that Arv Hanson had not yet computer-messaged that the mock-up of the new detector was finished, Tom considered which tasks were next in line.

I'll bet Bud is here already, Tom thought, and went off to look for the young pilot.

Finding his friend breakfasting in the plant's cafeteria, Tom said:

"I'm thinking I might like to give the Kangaroo Kub and the Skeeter another good workout before they're put aboard the Flying Lab. I don't s'pose you'd be interested in a little race, would you, Mr. Barclay?"

A wide grin was Bud's response. "You just might be able to persuade me, Professor Swift!"

"It was on that supposition that I took the liberty of clearing the skytrack for us," said Tom, giving his pal a thump on the back. Clearing the skytrack was Enterprises slang for filing the necessary flight path information with the federal authorities, who were very supportive of the Swift experimental programs. Continued Tom: "You take the copter and I'll fly the plane. I'll give you a ten-minute head start."

"You're on, jet jockey!" Bud agreed, swallowing the last of a sky-high orange juice.

Side by side the boys warmed up the two flying "babies." The Skeeter, Bud's vehicle, really did resemble a strange sort of bug-eyed mosquito, with its bulging double-domed cockpit and winglike rotor overhead. The craft's rotor blades bore little resemblance to those of a conventional helicopter. Broad near the hub, the blade tips were elongated toward the direction of rotation, having a scythe-like form. Slots in the edges functioned as thrust-vents for the pulsing minijets that would whirl the rotor when the Skeeter was functioning as a helicopter. When functioning as a jet plane, the hub of the blades would be tilted back a few degrees off the vertical and the rotor, unpowered, would be allowed to turn freely in the onrush of air. This would provide the wingless vehicle with a steady lift, in the manner of an autogyro.

The Kangaroo Kub—so named because it would be riding in the Sky Queen's

"pouch"—was a true jetcraft and lacked the ability to hover in midair. But it made up in sheer speed and maneuverability for what it lacked as a "hummingbird." The Kub had the sleek V-swept wings seen on most jet-powered aircraft, but Tom could also see, in

his mind's eye, a feature that made the tiny jet unique: a second pair of straight-angled winglets that folded out from the fuselage for smooth flying at much slower speeds, close to the lazy pace of prop-driven planes. In a way the Kangaroo Kub was a true jet biplane.

Tom explained the course to Bud via the televoc system. "We'll make a ten-mile run to the yacht club, wing over, fly back above the construction company field, and circle back above the high school."

"And finish up with a precision landing between those two big poplar trees at the edge of the woods," Bud shouted back, his voice alive with excitement. "Let's see who comes closer to this line." He pointed to a tar strip in the runway. "My money's on Budworth Newton Barclay!"

"So you think you can beat me in that windmill?" Tom giped.

"Windmill!" Bud chortled. "Don't be makin' fun of your baby, Father Swift!"

Without another word, Bud revved up the special thrust engines of the "jetrocopter," as Tom's jet helicopter was officially called. Having decided to lift off like an autogyro rather than a chopper, Bud left the ground a few moments afterward with surprising speed—as if in a single bound!

"Nice takeoff, but I'll be back at the field solving differential equations before you're halfway around the course," Tom televoc'd his good pal. Ten minutes later Tom's jet took off with a whoosh.

Though Bud had zipped along the course in good time, the Skeeter was not specifically designed for speed, and for all his bravado he expected Tom to overtake him in the Kub in a matter of minutes. Bud was surprised when he touched down in the Skeeter back at Enterprises with Tom's jet nowhere in sight. As the seconds passed, he found himself working hard to avoid a disturbing thought—had Tom fallen victim to his mysterious enemies?

But even as he acknowledged his fears, he breathed a sigh of relief. The Kub was roaring in for a landing. As it rumbled to a stop and Tom opened the hatch, Bud walked over to the Kangaroo Kub, raised his eyebrows, and gave his friend an arrogant look.

"Well, fly boy, want to sell your jet cheap and buy a windmill?" he asked.

Grinning ruefully, Tom explained that he had been forced to compensate for a jammed rudder. Concerned, Bud helped him examine the plane. They quickly found that a loose sensor chip had caused the appearance of a jam.

"Thank goodness it's just a brain problem, not a muscle problem," Tom joked, clicking the tiny unit back into position.

"Now I'll give you another chance," Bud proposed. "After all, that wasn't much of a speed test."

Once again the two craft started on the course. This time Tom flipped the Kangaroo Kub sharply around the turns. Shooting far out in front on the first leg, he lost sight of Bud on the second, and whipped quickly in from the third and last stretch.

When Bud finally brought the Skeeter back to earth, Tom was waiting for him with a look of exaggerated triumph on his face.

"Been away?" he asked, showing Bud a series of equations and formulas he had been making on a pad. "I've had a lot of time to work on these space symbols. And solve the problem of perpetual motion."

Bud gave him a shove. "Listen, I'll admit I can't beat your plane for pure speed, but I'll take this little number any time." He patted the jetrocopter's fuselage. "Tom, this ship's a dream! She handles like a baby carriage. I can set her down on a dime and give you nine cents change!" Tom grinned. Bud was so enthralled he was repeating his superlatives! After checking over both aircraft, Tom was well pleased with their performance. "I guess that about winds up our work on them," he remarked. "All we have to do now is berth them inside the Flying Lab."

Parting from Bud, who had a morning aerial delivery assignment that would take him to Trenton and back, Tom returned to his office in the main building. He hoped to find a message from Arv Hanson saying that the new detector was ready for a trial. But there was still no message on Tom's computer.

"Poor Arv!" Tom said to himself. "Guess I really handed him a hard nut to crack." But no sooner had Tom thought these words than he heard the delicate chime-tone of the televoc, as if in his ear. Tom responded and heard the familiar voice of Arv Hanson, which still bore traces of his Scandinavian ancestry.

"This is Hanson over in H-3, Tom," he said. "We ran into some snags with your new device."

"I figured that must be it," replied Tom. "What kind of snags?"

"I'll let Linda tell you. She's been working with it for hours now."

There was a pause, and Tom could visualize Hanson signaling Linda Ming, one of the plant's best technicians, to activate her televoc. "This is Linda, Tom. I'm sorry we couldn't finish everything for you overnight, but there seems to be a problem that didn't occur to anyone until we ran the final tests."

"A big one?"

"I've come up with a solution, but you'll want to look it over in some detail, I think. It may involve slightly altering the oxygen compressor ducts in the plane."

"Oh really?" Tom felt completely baffled. "I don't see how there could be any interaction at all between them."

"Pretty surprising, isn't it? I'll show you what I've come up with."

"I'll be right there," Tom replied.

Tom hurried over to the multistory technical labs facility, Building H. He took the main elevator to the third floor, going over the problem in his mind. Stepping into the third floor hallway, he noticed, in an absent-minded way, that the doors of the large service elevator, at the opposite end of the hall, were open.

Guess someone's moving a piece of equipment, he thought.

He strode to Lab 3 at the middle of the hallway, gave a couple raps on the door, and turned the handle. Stepping inside, he let the door slam shut behind him and stopped short in surprise. The large windowless room was dimly lit by only a single counter-top lamp, rather than by the bright overhead lights. And no one else seemed to be present!

"Arv?" Tom called out. "Linda?"

He whirled at a slight noise behind him—a man's throaty chuckle.

Pressed tight against the wall next to the door stood a shadowy, menacing figure. In his hand he held a small silver pistol of elegant design. The gun was aimed directly at Tom's chest!

## CHAPTER 9

### THINGS GET SERIOUS

"YOU DON'T NEED that," said Tom carefully. "There doesn't need to be violence. Tell me what you want here."

The man shook his head sharply, as if in warning. In the dim light Tom could see that he was wearing thick wraparound welder's goggles to disguise his eyes, with a bandana covering the lower half of his face. He was dressed in what looked like a nondescript Swift Enterprises coverall outfit.

"But I promise you this," the young inventor continued, "if you've harmed any of my employees or my friends in any—"

"Shut up!" hissed the man. "You've got yourself into some things that don't concern you, Mr. Swift."

"What things?"

The man refused to answer, but approached closer to the young inventor. He motioned with his pistol. "Now we're going to do this very quietly. According to the blueprints spread out on this workbench, your new device is complete and ready for testing. I want you to give me a little course—the three-minute version—on how to calibrate and operate it."

"And then?"

"And then I suppose it depends on my mood at the time, don't you think, Mr. Swift?"

Tom stifled the protest forming in his throat, sensing it would be useless. "All right. But remember, I don't yet have the feel of the machine. I've only seen it on paper."

"Oh, that's all right," whispered the man in an almost convivial tone. "We can't expect you to do better than your best, now can we? Just show me—"

The intruder never finished his sentence. Beyond the door, which had latched automatically behind Tom, came a loud voice from the hallway.

"Hey there, buckaroos, someb'dy get the door fer me, would you? Got a full tray o' my new Rio Grande crullers fit t'be tried." It was Chow! After a moment the Texan tapped on the door with the toe of his boot. "Aw, now lissen, Hanson, I know them chocolate flapjacks t'other day weren't to everyone's taste, but this here's a real delight. So let me in, dang yer buttons!"

The door lever jiggled. Even in the dim light, Tom could see it start to turn. The intruder backed away, momentarily pointing his pistol at the door. In that moment Tom sprang like a panther!

He charged the gunman full force, slamming both of them to the floor just as Chow burst through the doorway—only to stumble over Tom. Chow's tray went in one

direction and Chow himself in the other, landing like a beached whale next to Tom's ear. "Boss," Chow panted, "what in all-gol-tarnation are you doin' down there?"

But Tom Swift was already struggling to his feet. The intruder had just slipped out the door behind Chow, and Tom could hear his frantically sprinting footfalls upon the hallway tiles. There was still time to capture him!

Throwing back the door to the lab, Tom catapulted into the hallway. But which way had the man run? No one was in sight, and there were elevators at either end of the hall.

A ding! from Tom's right decided the issue. "He's taking the service elevator!" Tom thought, hurling himself down the hall toward the elevator's twin doors, which were already halfway closed. He reached the doors in seconds and clawed at their edges, trying to keep them open, but they slipped from his grasp and the elevator clanked shut.

"And I can't beat him down to the ground," he told himself in angry frustration. The open stairwell was at the opposite end of the hallway next to the main elevator; and because the service elevator opened to the outside at ground level, Tom would have to exit and race halfway around the building to catch his quarry.

Chest thudding, he activated his televoc. "Harlan Ames," came the response.

"This is Tom. We've had a break-in at Building H!"

"What happened?"

"Never mind for now. Can you monitor the ground-level exit of the service elevator with the security minicams?"

"Sure can." After the briefest pause, Ames continued: "Got it on my monitor now. I'll zoom in."

Tom began to breathe more easily. "At least we'll be able to track him as he starts across the plant."

"Right," said Ames, "and I've just signaled half a dozen of my guys to seal off that side of the building. Tom, are you all right? Was this guy armed?"

"With a small pistol," Tom replied. "The indicator on the elevator shows he's stopped at the bottom. Has he come out yet?"

"Negative," was Harlan Ames's terse reply.

"Weird," muttered Tom. "What's he doing in there?" Then an alarming new thought struck the young inventor. "Harlan—he may have stashed some weapons in the elevator! Tell your men—"

"They know their jobs, Tom," said Ames simply. "They're in position now. Could your gunman have gotten off on the second floor? Or between floors?"

"Not a chance. I've been watching the indicator." Tom paused, thinking. "This doesn't make sense, Harlan," he mused. "What's he trying to do, lure us into coming and—"

Then Tom winced. There was another possibility! "What a chug I've been!" Tom cried, turning and launching himself toward the other, distant end of the hallway.

"Tom?"

But Tom didn't pause to answer, flinging himself at the stairwell and taking it three steps at a time, fairly leaping over the second floor landing. From the first floor landing he threw himself through a pair of swinging doors that led into the employee lounge.

The lounge served several buildings and was quite large. It was already abuzz with employees—mostly technicians and runway workers—coming on for the late morning shift. Dozens of eyes turned curiously in Tom's direction as he burst through the doors. "Listen up, everybody!" he shouted. The room fell silent. "I'm looking for a man, maybe five-eleven, in hangar coveralls or something similar—he would have come through these doors behind me within the last five minutes. I think his hair would have been kind of messed-up. It might be someone you know—or maybe not. Did any of you see anything?"

There was a mutter of low voices and a shaking of heads.

"A whole team came down from the second floor just a few minutes ago, Tom," said one young engineer in a white shirt. "But it's their break time, and they always take the stairs."

"I didn't notice anyone acting funny," said a middle-aged woman, whom Tom recognized from the accounting office. "Something going on?"

"No," answered Tom. "Nothing." But he shook his head disgustedly.

"Tom!" came the loud voice of Harlan Ames as he came running up with two of his security staffers. "Did you see him?"

Tom shook his head again. Ames continued: "We just used the tele-tec on the elevator. It's empty, which I gather you already figured out." The tele-tec was the latest version of the television detector invented long years before by Tom's namesake. It was a camera that could take x-ray-like images from a distance through solid obstructions, such as the walls of buildings.

"He really played me, Harlan," Tom said. "He must've set the service elevator door on override, so it would stay open, and then plugged some micro-gadget into the circuit that would respond to his remote signal. He runs down the hallway to the end next to the main elevator, pressing the button on his remote control. Then he steps around the stairwell corner, out of sight, just as I come out into the hall and hear the bell of the service elevator ring."

"Leading you off in exactly the wrong direction," said Ames. "And so, he can take a leisurely stroll down the stairs. I take it he was wearing something to disguise his face? Without your telling me what it was, I'll guess it was easy to take off, and easy to stow somewhere in his clothes, or in something like a briefcase."

"And then he mingles with the employees, and leaves when he feels like it," concluded Tom. Then his eyes widened. "Good night! We've got to check on Arv and Linda up in the lab!"

"No we don't," said Ames, with a wan smile. "My men just voc'd me that the whole lab team is fine. Apparently the gunman locked them in the shielded test chamber, the one with reinforced walls. It's no wonder you couldn't hear a peep from them. Oh, and Chow's fine too—except, something about his snacks being ruined."

For the next hour, Tom and Ames questioned the laboratory workers and sought after fingerprints or other clues to the identity of the intruder, to no avail. It developed that neither Arvid Hanson nor Linda Ming had made the call that brought Tom to the

laboratory. "But the first thing the guy did was pluck the televocs off our collars," said Hanson. "If he used those units to talk through, their circuits would have allowed him to imitate our voices almost perfectly."

"Which shows that he knows a lot about the inner workings of Enterprises," commented Tom. Later in the day, the two tiny units were traced by electronics to a dumpster near Building H.

"Things are getting mighty serious, Tom," commented Harlan Ames. "It's pretty clear the Verano rebels have the resources to get around our standard security measures, high-tech or not."

"And to think the guy works here among us!" added Tom.

"It's likely he's a relatively new hire. I can pull the records on those and do some additional checking." Ames paused. "I hate to admit it, but I don't know what else to do at this point."

After Ames and his men had left, Tom went back up to the laboratory with Arv Hanson to run the first formal tests on his new invention, the long-range radioactivity detector.

"It looks promising, Tom," remarked Linda Ming, who had set up the equipment. "Of course Ole and I couldn't resist a few preliminary tests—just out of curiosity."

"It was all the Dragon Lady's idea," said Hanson. "Still, it allowed us to tune things up a bit. By the way, what do we call this brainstorm of yours? Is it still a 'super-Geiger counter'?"

"No," Tom replied. "Mr. Geiger has been honored enough, and my machine works in an entirely new way. I'm calling it the Damonscope."

"After your Dad?"

"Nope. After a family friend from way, way back."

Wakefield Damon had been a colorful eccentric living in the town of Waterfield, near Shopton, when the first Tom Swift had been a youth. When his newly purchased motorcycle had tried to "climb a tree," as he put it, Mr. Damon had presented it to Tom, and young Tom's improvements to its motor constituted his first invention. Tom Swift had shared many adventures with his much older friend during the first part of the twentieth century, and he was remembered and honored even now.

The Damonscope mock-up resembled an enlarged version of the old-fashioned box cameras from days past. It was basically a square black chassis with a tubular lens assembly protruding from the front. Cables from the box led to an instrument readout panel.

"The target is in place in that anti-rad bottle over there," said Linda, pointing to the opposite end of the lab. "Shall I expose it?"

"Go ahead," Tom replied, switching on the Damonscope.

Linda pressed a button on her remote control, and a band encircling the container slowly rotated until an opening came into view. Adjusting the various dials on the instrument panel, Tom concentrated his attention on a small round monitor, which resembled a radarscope screen. In the middle of the monitor was a shadowy black-and-white image of the anti-rad bottle and the rack supporting it. As Tom continued making adjustments,

the area surrounding the bottle's aperture began to show a green halo on the screen.

"There it is!" cried Tom, delighted. "The Damonscope is actually mapping the pattern of radiation onto the viewscreen."

After testing a variety of settings, Tom called his father on the televoc.

"That's wonderful news, son," said Mr. Swift, "especially coming on the heels of the incident this morning. And I have some news for you, too."

"What is it, Dad?"

"It's a bit disturbing. The Canadian authorities informed the FBI that a small plane was stolen from a farm up in Newfoundland earlier this morning. The owner caught a glimpse of the thief, and it matches the man who stole the helicopter!"

Tom's voice grew solemn as thoughts of his new invention momentarily vanished from his mind. "Have they been able to track it?"

"From the few sightings received, it's heading south by southwest, which puts it on a fairly good course towards Shopton. But Tom, this man must be quite a flier—he's taking the plane dangerously low, presumably to elude radar."

"It figures," observed the young inventor. "Dad, some of our Enterprises planes are outfitted with that new phase-diffraction radar of yours, which is just the thing for catching a ground-hugger. I want to go up and see what I can see!"

"I won't try to stop you," said Damon Swift. "But take another experienced pilot with you. Is Bud back yet?"

"No," was Tom's response. "I'll take Hank Sterling." Hank Sterling was a young engineer who had become fast friends with Tom and Bud.

"That's a good choice," Mr. Swift commented, much relieved. "You may need help."

A few minutes later Tom was piloting one of Swift Enterprises' two-seater propeller-driven planes down the runway.

"I'll swing her in a big circle, concentrating north and east. Keep a sharp eye on the sky, Hank," Tom directed the blond, square-jawed young engineer. "We're looking for a Renshaw, kind of an older model."

"I used to fly one," said Sterling. "I'll recognize it."

They flew for several minutes at full throttle. Then Tom broke the tense silence, gesturing at the radar screen. "Picking up something, very low. Let's take a look." He banked the plane, heading onto an intercept course. Scanning the horizon ahead of them, Hank said suddenly:

"I see something far ahead."

Tom's alert eyes shifted from his instrument panel to the sky in front of him as the Swift plane drew closer. It was definitely a Renshaw dead ahead, and they were rapidly gaining on it.

Hank whistled. "Man, that guy's really clip-ping the trees. I wouldn't think it possible to fly so low!"

"Just shows he really is a low-down snake," joked Tom.

"Hey, he's swinging around!" exclaimed Hank.

"He's probably going to land," Tom murmured, down-throttling, "but I don't see any

airstrip."

A minute later the Renshaw dipped behind a stand of tall pine and was lost to view.

Minutes later Tom whirled over the trees just in time to glimpse the plane taxiing into a large shed at the end of a meadow. Behind the shed stood an old farmhouse.

"A private airfield!" Tom exclaimed. "I didn't know there was one around here."

Circling over the long meadow, which served as a runway, Tom banked to land. Making a short, sharp approach, he put his flaps and wheels down, throttled back, and glided in to a smooth landing.

"There's no way of concealing ourselves," he told his companion, "so be prepared for anything."

When the plane had been braked to a stop, Hank jumped out, but Tom delayed a moment to radio their discovery to his father. As they were now too distant to use their televoc devices, Tom utilized the plane's inbuilt radio set.

"I'll contact the local authorities," said Mr. Swift. "You and Hank get out of there! You've done what you came to do."

"Say again, Dad? You're breaking up..." He switched off the radio unit. "Now Dad and the folks at home know where we are, Hank," Tom said.

"And so your greasy-haired pal and his buddies would be terribly foolish to mess around with us, wouldn't they?" Hank was grinning.

Tom grinned back. "Terribly. So it might just be a perfect time to pay a call on our country neighbors."

"Absolutely," declared Hank, unbuckling his safety harness. "After all, we're all fellow fliers!"

There was no one in sight as Tom and Hank strode determinedly toward the barnlike shed into which the fugitive's plane had been rolled and the door closed. Reaching it, Hank tried to swing the big door up and open.

"Locked," he said.

Tom pounded on the panel. "Open up in there!" he commanded. "We know you're inside!"

"Ah, the brilliant young Swift!" said a cool, calculating voice from around the corner of the shed, as four heavily armed men surrounded them from behind. "It seems we are not inside after all. What a new experience it must be—to be wrong!"

## CHAPTER 10

### THE MYSTERIOUS FIREFIGHT

TOM WAS NOT surprised to see that the man who spoke matched the description of the slick-haired man who had stolen his jetrocopter and frightened Sandy.

"And so we meet at last, eh?" sneered the man.

"Please!" retorted Tom. "We don't even say that on television anymore!"

"We are on television?" asked one of the others nervously. His voice was heavily accented.

"Sure," said Hank smoothly. "It's one of those reality shows. Your mother is watching."

The sneering man nodded, as if in approval. "Yes, bravado in the face of death. That is a good thing, I think. They say, you can live any day, but you die once only."

He made a gesture, and the four other men, clearly his subordinates, approached Tom and Hank. "Por favor, do not resist us," said one of the men. But there was no chance for resistance. The men produced strong-looking cords, intending to tightly bind their captives' hands behind them.

Suddenly Tom was struck by the realization that he and Hank were still wearing their televoc pins, which would allow their adversaries to perfectly mimic their voices and impersonate them!

His hands raised, Tom said "Sterling!" sharply, as if warning his companion not to resist. Then Tom added, "There's no need to pin us down, guys. You can lose the pins anytime." He hoped the Spanish-speaking group would assume lose the pins was American slang.

Hank appeared to have understood. He shrugged his shoulders, arms upraised, and Tom saw him nudge the shoulder bearing the communicator pin with his jaw.

"Turn around," ordered the man assigned to Tom. "Put your hands behind you." The young inventor knew that his hands were about to be tied.

"Not too tight, please, Señor." As Tom half-turned, lowering his hands, he managed to hook his televoc with his thumbnail and flick it off. A slight sound told him the tiny device had fallen to the dirt below. Guessing its position, he managed to step on it as if losing his balance while turning. The man tying him said nothing, quickly binding his wrists with a number of sturdy loops.

The leader now resumed his train of thought. "But perhaps you will not die after all," the man continued. "For you are rational men, and my compadres and I are rational as well."

"Don't try to make funny business," one of the armed men cautioned.

"Don't worry, Miguel, they have no chance," another answered. "We have them tied up like chickens on market day, eh?" The men all laughed at this.

"We'll deliver these hombres to the capitan," said the man called Miguel. "He will be pleased to see them, no?"

"He will be most pleased," agreed the slick-haired leader.

"Where are you taking us?" Tom asked defiantly. The answer was a shove from behind, bringing more laughter. Tom and Hank were prodded along a path to the farmhouse.

They were led through a short hall which opened into a large, well-furnished room. A heavysset man with European features reclined in a chair, smoking.

"Our visitors come to meet you," said the man in charge of the patrol, holstering his revolver.

The heavysset man regarded the captives nervously, puffing smoke into the air. "Thank you, Canova." Well, thought Tom with grim humor, at last I know the name of Mr. Oily-Hair!

"I take it you are the capitan," commented Hank.

The man dashed his cigarette into an ashtray and shook his head. "You do me too much honor," he said. "The capitan awaits you elsewhere—far away, in fact."

"In Verano, I'll bet," declared Tom.

"Ah!" said the man, noncommittally. "As for me, there is no reason not to tell you my name. It is Leeskol. Dr. Leeskol, in fact."

"Not pleased to make your acquaintance," Tom said. "You're crazy if you think you can kidnap the two of us and trundle us all the way to South America! Obviously we've contacted the authorities before landing our plane."

"Yes—obviously," Leeskol replied. "But you see, there is only one road to this lonely farmhouse of ours, running to the north and the south. To the north, sadly, the old bridge has collapsed, and to the south a tanker truck has just had an unfortunate accident which will block the road for hours. Of course, there are planes and helicopters, but our little airfield is not lighted, you know, and the sun is going down as we speak. There will be several hours, I think, before your 'authorities' come to disturb us."

Hank stared steadily at Leeskol, and was rewarded by seeing him twitch. "How did you know Tom and I were out searching for your plane? I gather you made these preparations for our benefit."

"You ask how we know—how do we know anything, Mr. Hank Sterling? We have our ways. When we knew you had spotted Pedro Canova in the Renshaw and seemed preparing to land, it was easy to have our tanker truck driven into position. We would have used it no matter who had discovered us. But I cannot take credit for the bridge. It has been out for two years, I'm told!"

Tom and Hank were herded down a creaky wooden ladder into a musty cellar that seemed as wide as the entire farmhouse. It was lit by a single yellow bulb. There the man called Miguel removed the cords around their wrists. They were ordered to stand at the far end of the room, and after their captors had climbed the ladder again, it was pulled up through the trap door.

"You cannot hope to escape the cellar," Leeskol called down through the trap door. "It is entirely underground on all sides, and the ceiling, of thick wood, is six feet above your heads. But do not be disheartened—you may expect to leave within an hour or two." The door clattered down, and Tom and Hank could hear it being bolted above.

"Well," said Tom in a whisper, "I guess we'll be meeting the man in charge whether we want to or not."

"As well as free passage to picturesque South America," Hank snorted. "Thanks for signaling me about the televoc pins, by the way."

"I was able to drop mine to the ground."

"That sounds like an improvement on how I got rid of mine."

"Why? What did you do?"

"I swallowed it!"

This forced a muffled laugh from Tom. "Don't worry, Hank. It won't hurt you. We'll just take it out of your salary!"

The two settled down to wait, conversing in whispers. The minutes dragged slowly by. Suddenly Tom sat bolt upright. "Listen! Something's happening up there!"

They could hear the floorboards creaking and the muffled sound of excited voices.

"Our limo must have arrived," Hank remarked. "Seriously, how do you think they plan to transport us?"

"I think when Doc Leeskol said 'just one road,' he meant 'just one road on the map'," responded Tom. "I imagine they've cleared a backwoods trail hidden beneath the trees, just wide enough for some sort of all-terrain vehicle."

"Bet you're right. And at the end of the road, a jet to Verano."

"With all the proper—" But Tom was interrupted by a loud sound that made both of them flinch. Gunfire! From overhead came the confused thud of running feet and shouting in Spanish. Then came another volley!

"It's a firefight!" Hank cried. "Hit the deck!"

They flung themselves to the floor, looking about for protection in case the bullets would penetrate the wooden floor above them. But there was nothing to shield them; the cellar was unfurnished.

The noises above had developed into a generalized chaos. Tom could envision their captors huddled below the farmhouse windows, automatic rifles blazing away into the early evening gloom. But against whom were they fighting? The police? The FBI? Then, as if by the flip of a switch, all sounds ceased. Tom and Hank waited tensely, five, ten minutes.

"Maybe the good guys won," said Hank hopefully.

"Then why haven't they released us? That trap door wasn't hidden," Tom pointed out. The silence continued unbroken. Finally Tom said, "I've had enough of this. Shall we escape?"

"Hey, I'm all for it. What do you have in mind?"

Tom pointed up at the underside of the trap door. "It seems to me the bolt on that door was just a simple slide-bolt, loosely fitting with no place to hook-in a padlock. By jiggling the door from underneath, we just might be able to work it loose."

Hank nodded. "Great plan. Are you wearing special Swift elevator shoes? The ceiling is quite a bit out of reach."

Tom grinned. "Not if one of us stands on your big broad shoulders, Mr. Sterling!"

Hank hoisted Tom up on his shoulders, where the young inventor precariously rose to his feet. He found that he could maintain his balance by pushing upward against the ceiling, which was now within reach. After a last moment of listening, Tom began pressing on the trap door. To his amazement it swung readily upward with no effort at all!

Springing up from Hank's shoulders like a jack-in-the-box, Tom was able to grab the edge of the opening and work his way up. All was dark and silent. Finding the ladder resting along the wall nearby, Tom lowered it through the door. In a moment Hank was standing beside him.

"Hank, we heard them bolt that door," observed Tom, puzzled. "Which means someone unbolted it for us during the gun battle."

They went out into the main room, which was strewn with broken glass, overturned furniture, and shredded sofa cushions.

Hank pointed. "Look there, by the window." In the wan moonlight, Tom could see a slumped figure. He stepped closer, cautiously. It was Miguel.

"He's gone," Tom said. "Looks like he took a bullet."

They made a cursory search of the farmhouse. There were no other bodies. Nor was there a telephone. "But we can use the radio in the plane," Tom declared. "Unless they've disabled it."

Unfortunately that was exactly the case—the radio had been smashed, and the plane's fuel line cut. "Well, maybe I could pound on my stomach in morse code!" Hank joked. Checking the big shed, they discovered that the Renshaw was gone.

"But look here," cried Tom, pointing down at the ground, which was somewhat soft and muddy. "Tire tracks on top of our own footprints! Someone came through here and left again."

"The newcomers may have overcome the kidnappers after a fight," Hank mused. "Then they split into two groups, one for the plane and the other for the vehicle."

Tom's brow furrowed in puzzlement. What sort of danger was he—and his friends and family—facing?

Suddenly a roar of engines broke the eerie silence!

## CHAPTER 11

### VISITORS HUMAN AND INHUMAN

A half-dozen offroad motorbikes burst from the woods into the open meadow. The vehicles converged on Tom and Hank as dark-jacketed men, silhouettes in the bikes' headlight beams, leapt to the ground and trotted forward, guns drawn. As Tom's eyes darted right and left, seeking an opening for escape, a new sound reached his ears—the rhythmic whomp-whomp of helicopter blades cleaving the air above. And Tom recognized the sound!

"It's the Skeeter!" he cried, as a spotlight jabbed down and swung across the meadow to where Tom and Hank were standing, pinning them in its bright glare.

One of the approaching men yelled out, "It's them!" The others came to a halt, lowering their weapons, as the speaker stepped forward.

"Hal Brenner, FBI." The man flashed his identification in front of Tom. "Everything clear here?"

"I think so," Tom responded. "That is, as far as we can tell. One of our abductors is dead." He motioned toward the farmhouse.

"Uh-huh. How many were there?"

Hank answered. "There were six originally."

Brenner shook his head brusquely. "Nosir. Three more at the tanker truck, plus one on a hill near the old bridge with binocs and a cellphone. All in custody, in various states of health."

The Skeeter had landed a hundred feet away. As the door popped open, a familiar figure gave a jaunty wave. "Tom! Hank!"

"Bud!" Tom yelled back in reply.

Agent Brenner took lengthy statements from Tom and Hank while his men scoured the farmhouse property from one end to the other. After a considerable time, one of the men came back to Brenner and conversed with him in low tones.

Brenner turned to Tom and Hank. "Besides the man you call Miguel, there's another one lying in the weeds next to the shed. We need you to identify him." He led the two to a crumpled figure spread flat in the mud, face down. Brenner briefly lifted the man's head so his face was visible.

"One of the kidnappers?"

Tom shook his head. "Not one that we saw, anyway."

"All right," said Brenner. "You can go, Mr. Swift, Mr. Sterling. Barclay over there said he'd fly you back to Shopton."

As the jetcopter whirled through the night air, Tom and Hank recounted their experience a second time for Bud's benefit.

"Wish I'd been there!" he exclaimed. "After we got your last message, Tom, your Dad decided it would be better not to go in with a chopper, so's not to provoke any craziness. We tried approaching by the main road, but—"

"We know, Bud."

After landing at Enterprises, Tom, Bud, and Hank went their separate ways. When Tom finally arrived home, he was met with relieved embraces by his mother, father, and sister.

"Your father tried to make light of the situation," said Mrs. Swift, "but I must say he's not a very convincing actor. I was so worried!"

"We all were, Tom," added his father.

"So there were two mystery gangs involved in this!" Sandy mused.

"Yes," said Tom wearily. "And both of them used guns and ammo, not alien disintegrator-rays."

Sandy stamped her foot indignantly. "You just won't listen! Once a big brother, always a big brother."

Tom couldn't repress a yawn. "This big brother is dragging himself off to bed."

The next day was occupied in preparation for the first aerial test of the Sky Queen, which was to happen the day following. Word of the imminent flight had somehow gotten out to the press, and Enterprises was besieged by inquiries, not only by telephone but at the main gate as well. Harlan Ames ordered extra round-the-clock security.

Meanwhile, Tom supervised the installation of the completed model of his Damonscope onto the Flying Lab, as well as the securing of the Skeeter and Kangaroo Kub in the ship's hangar deck.

At four in the afternoon, the telephone rang at The Glass Cat in Shopton. Bashalli answered, and a nervous voice said: "Hi, Bashalli? This is... um..."

She heard a voice in the background whisper, "Tom."

"Tom..." the first voice continued.

"Swift!" whispered the other voice.

"I know!," hissed Tom under his breath to Bud.

"Hello, young Mr. Swift," said Bashalli. "And to you also, Bud."

Tom cleared his throat. "Bud, er, seems to think I need to relax a little before some important work we'll be doing tomorrow. I wondered—would you care to drop by and let me show you some of our points of interest here at the plant?"

"Ah," she responded. "The Swift museum! But you realize, Thomas, that before I can be so long in your presence, I must have the approval of my oldest living relative. It is our custom."

"Oh, really?" answered Tom, disappointed.

"Yes, Great-Uncle Sabhi, 103 years of age. He is away on an elephant hunt at the moment, but is expected back before the new year." After a silence, she added: "Tom, for a genius you are very gullible, I think."

"Oh, I knew you were kidding!" retorted Tom indignantly.

An hour later, Tom and Bud were escorting Bashalli through the Swift Enterprises visitors center, which featured a variety of displays, photographs, and models.

"Here's a picture of the first Tom Swift with his first airship, the Red Cloud," said Tom.

"Ah yes, but this interests me more," remarked Bashalli. She pointed at a newspaper article and photograph displayed behind plexiglass. Dated July 20, 1969, the article was from the Shopton Evening Bulletin and bore the headline:

**TOM SWIFT CONGRATULATES MOON-LANDING PIONEERS**

Beneath the headline was a smaller sub-headline, "Wish I'd Got There First," Says Inventor. The photograph showed the first Tom Swift, slender and white-haired, holding a globe of the moon.

"At least he lived long enough to see it," she commented.

"Yes," Tom said wistfully. "At least that. You know, he had proposed a moon-landing project to Swift Enterprises back in 1958, but his own son, who was running the place, turned him down. Grandpa Swift thought Great-Grandpa Swift was—unreliable."

Bashalli raised her eyebrows in surprise. "Do the Swifts not always stick together, through thin and thickness?"

"Not in this case," Tom responded. "But it wasn't just George Swift who let Tom down—it was the whole world, almost."

"Tell me about this drama," begged Bashalli. Tom looked at her with gratitude, and she sensed his need to talk.

"Way back in the 30's, my great-grandfather left on an expedition to South America," Tom began. "There, in a secluded region, he discovered an ancient meteorite that contained traces of life—life from outer space!"

Bashalli nodded. "I remember when those scientists found a meteor in Antarctica that had fossils in it, maybe from Mars. But that was not so many years ago."

"This wasn't fossils, Bash," Bud broke in.

"The meteorite contained seeds, which Tom planted and tended until some flowers were grown unlike anything ever seen on this earth!" continued Tom with growing excitement. "The flowers had miraculous medicinal properties, too. He submitted a preliminary report to the scientific journals, but before he could bring in other scientists

to verify his findings, his 'greenhouse' burnt to the ground in a mysterious fire. Everything was lost."

"But still, he was the famous scientist-inventor," remarked Bashalli. "Surely he was thought believable."

"Sure, he pretty much got the benefit of the doubt from the scientific community, although the discovery was never really publicized. And then—the second thing happened."

"What?"

"A few years later, Tom Swift designed a giant telescope with enormous magnifying power. Do you know what astronomers mean when they talk about a 'moment of clear seeing,' Bashalli?"

She smiled. "I suppose it means the obvious."

"It means that for the briefest time the normal turbulence of our atmosphere calms down, allowing light rays to reach the ground without the usual distortion. Well, on that one night there must have been a freak condition, because for just an instant his instrument was able to bring in an image of the surface of Mars, as if he were only a few thousand feet above it. And he saw a city!—buildings, aircraft, living beings moving around."

"Incredible! But I can not believe it."

"Old Tom wasn't alone," Bud interjected defensively. "His father, Barton Swift, saw it too. You know what he said?"

Tom completed the thought for Bud. "'Tom, my son, you have performed the greatest miracle of the age!'"

Bashalli saw a trace of tears in the young inventor's eyes. "Yet this is another miracle we have heard nothing about," she commented sympathetically.

"The moment of clear seeing never came again, and no one would believe them."

"Ned Newton believed them," Bud said in steely tones. "But when Tom's son took over running the show a few years later, he discouraged all talk about it. It became a forbidden subject! So Ned quit his position at the Swift Construction Company, and there was bad blood between the two families. That's why my mother's family moved to San Francisco. The Newtons and the Swifts didn't really reconnect until a few years ago."

Bashalli nodded understandingly. But Tom and Bud shared a glance that acknowledged that part of the story had not been told. It was because of the hurtful public reaction to the first Tom Swift's extraterrestrial discovery that Tom and his father had withheld making an announcement about the missile and the space symbols. And maybe going back to South America will somehow bring things to closure for the family, Tom thought.

"And now the scientists have sent cameras to Mars," said Bashalli, carefully. "But they haven't found any trace of life, have they?"

"My Dad was involved in those projects," Tom answered, his tone defensive. "That's what made it doubly painful. But Dad and I will always believe that there was a city up there, which was abandoned in the decades that followed and buried under the dust

that's always blowing around on the Martian surface."

Feeling a need to change the subject and the mood, Tom and Bud led Bashalli to Tom's private laboratory-workshop, where he had models of his current invention projects, including the Flying Lab. The model of the Sky Queen was two feet in length and made of lightweight plastic. Richly detailed, it showed that the super-plane would be slope-sided and snub-nosed, and more or less flat on top and bottom.

"The hull—yes, I know, the fuselage—is much like the American space shuttle, isn't it?" Bashalli commented, holding the model in her hand. "Except, you know, it looks upside down to me."

"That's because the cockpit viewport is underneath the nose instead of on top," said Bud, proud to show off his knowledge. "Makes it easier to get a view of the ground."

Bashalli turned the model over and indicated sixteen oval depressions in the underside, arranged in linear groups of four. "Those are the famous jet lifters, I take it."

"That's right—Bash," Tom answered. "Powerful enough to hold the ship in midair, like a balloon. And there at the rear of the bottom deck is the entrance to the hangar for the two small craft we'll be carrying with us. You can see how part of the underside of the fuselage slides downward like an elevator as the hatchway panel pivots upward." He demonstrated this with the model.

"Now tell me this, Tom of the Swifts. Why is most of your ship all the same color, but not the top?" She ran a finger along the top of the model, which was a dark olive-green, almost black, in contrast to the shiny metallic color of the rest of the model craft.

"Because the Queen is mainly solar powered," explained Tom. "Beneath the semitransparent 'roof' are multiple layers of photosensitive foil which turns the intense sunlight of the upper atmosphere into electricity, to be stored in reciprocal resonance capacitors."

"Think of them as flywheels," Bud said.

"As far as I am concerned, a flywheel is an exercise device for flies," Bashalli quipped.

"But it is this sunlight-power that makes the ship go?"

"Well, it gives us the electricity we need, which is a lot," Tom replied. "The actual propulsion comes from the four big jet engines at the rear, running on a new kind of hydrogen fuel, which is mixed with atmospheric oxygen in a free-electron grating."

Bashalli nodded. "I was wondering if you had a free-electron grating. And now I will ask you the big question, Tom. Why are the wings so puny, and facing the wrong way?" Tom and Bud grinned at each other. In place of the broad wings a large aircraft would be expected to have, the Flying Lab had only two small pontoon-shaped fins toward the front of the fuselage, angled forward.

"Here, let me show you something," said Tom, guiding Bashalli over to one side of the room. He switched on a small desk fan and aimed it in her direction.

"Feel that?"

She nodded. Tom picked up a rodlike instrument from its place on a worktable and thrust it into the stream of air. "And now?"

"And now it is much less," Bashalli said. "Have you invented an anti-fan machine?"

Tom chuckled. "Not exactly. You see, moving air tends to develop a slight electric charge—that's why you can give yourself a shock on a dry windy day when you touch a conductor. The charge doesn't amount to much, but this invention of mine generates a hyper-localized electromagnetic field that interacts with the charge developed by the airflow next to the hull, deflecting the flow. Those puny wings on the Sky Queen aren't wings at all, but aeolivanes, which—"

"Which Tom named after Aeolus, the god of the winds," Bud interjected.

"What they do is force the air flowing around the ship to go under the ship. The underside of the ship is the actual lifting surface. See?"

"See!" exclaimed Bashalli.

The boys showed their friend models of the Kangaroo Kub and the Skeeter. While examining the latter, she remarked, "And tell me why you call this thing a jetrocopter."

"It stands for 'jet-rotor copter'," Tom explained.

"Then if you don't mind my saying so, I think you should have called it the Jethro," Bashalli said with a smile, her eyes twinkling merrily.

That evening Bud joined the Swift family for supper. "How's it going?" he asked.

"Ready for tomorrow?"

Tom grinned and held up crossed fingers. "Totally."

"Will you be going up as well, dear?" Mrs. Swift asked her husband.

"Yes, Anne," he replied with a warm smile. "I'm as excited as a kid! The Sky Queen has the potential to revolutionize high-altitude research. Even these days, in a new millennium, there's so much we don't know about our own world and its atmosphere. Which reminds me," he went on, turning to Tom, "I've made some further progress deciphering the space symbols."

"The two triangles?"

"Yes," Mr. Swift confirmed. "Their mutual orientation is in ratio to the other symbols that we've concluded represent Earth and Mars. But the significant thing is, the triangles are incomplete—there's a small gap in their outlines. I believe this indicates a problem to be solved involving our two worlds. Taking the adjacent array into account, I'm inclined to think it's an environmental problem, perhaps something to do with our atmosphere or surface temperature."

Tom nodded with obvious pleasure. "I've come up with the same thing!"

Bud now broke in. "Say, I've been meaning to ask—have you been able to analyze what the missile is made of since you moved it to your laboratory?"

"No, not at all," Tom responded. "Spectrograph readings, from reflected light, indicate a silicate base, but the other lines just don't make sense in those combinations. And we can't extract a sample, because nothing penetrates it, not even a laser."

"Nor can we see inside the thing," added Mr. Swift, "not by x-ray, not by sonogram, not by magnetic resonance. And it absorbs radar waves perfectly."

"What gets me is that there's no thrust exhaust opening," Bud said.

"We don't know what makes it go," Tom remarked, "but someday we'll figure it out, and that'll open the door on a whole new propulsion technology for our little world."

Late that night, Tom lay tossing and turning in his bed. The excitement of the upcoming day—the first flight of the Sky Queen—seemed to surge over him like waves of electricity.

Suddenly he heard an eerie, low sound, almost like a whistle. Warily opening his eyes, he first glanced toward his window, then lazily turned over on his side in the other direction.

Then Tom froze, his eyes bulging in disbelief.

A luminous, inhuman figure was floating towards him from across the room!

## CHAPTER 12

### THE FIRST FLIGHT

"GOOD GOSH!" Tom thought, his pulse racing. "Am I dreaming?"

The bizarre intruder was glowing a faint turquoise green, most of the luminosity emanating from its rounded, bulbous head, which seemed to be semi-transparent. There was no sign of nose, mouth, ears, or hair on the being's head, and only two dark ovals where its eyes should be. Below the head there was a suggestion of shoulders and a torso, but the glow extended no further down than that. It did not move like a person walking, but like something hovering in mid-air, ghostlike.

Tom forced himself to speak aloud. "Can you hear me?"

The intruder seemed to pause, waiting.

"Are you from the planet that sent the missile to us? My name is Tom Swift." Tom sat up, swinging his long legs over the edge of the bed. "If you could hang there for just a minute, there's someone I'd like you to meet. She's really just your type, and I happen to know she's desperate for a date. But listen, ET, don't let her cook for you if you value your health!"

There was a stifled burst of male laughter from the hallway, along with Sandy's irritated voice. "Oh, stop it, Bud, it's not funny."

Sandy marched through the bedroom doorway, flipping on the light.

"Oh, I suppose I shouldn't even try to fool you, Tom," she said.

Bud poked his head through the door. "What gave us away?"

"Nothing, flyboy—for about ten seconds," answered Tom, sitting cross-legged on his bed. "Then I heard the floorboards creak out in the hall. So what have we here?"

The "alien" turned out to be a sort of balloon sculpture, its "eyes" drawn on by dark marking-pen. A six-foot length of rigid plastic tubing, carefully taped to the back of the figure's head, allowed Bud to lift and maneuver it while out of sight in the hallway.

"How did you make it glow green like that?"

"Just a little penlight shining up the tube," answered Sandy, "which was my idea, and pretty clever if you ask me! The color of the balloons gave color to the light, and the tube—"

"I know," said Tom; "leftover pipe from when we had the lawn sprinklers re-done."

"Think of this as a send-off gag celebrating the big flight," Bud remarked.

"It was a good one," Tom chuckled. "And yes, sis, it was pretty clever, and I guess I

deserved it, too."

Tom slept restfully for the remainder of the night, and began the workday with a burst of energy. Now and then he glanced out the office window, which was high enough to allow a view of the nearby road to Shopton. He couldn't resist the thrill of pride as he took note of rows of parked cars and groups of people sitting in lawn chairs along the road, as if awaiting an air show. The road was also dotted with news vans from all networks and all parts of the country.

At 10:30 Damon Swift entered the office with a tall, red-haired young man who sported a neatly trimmed moustache. Bud Barclay entered behind them.

"Tom, this is Ripley 'Ripcord' Hulse, the former Marine Corps pilot I've been telling you about," said Mr. Swift.

Tom shook the visitor's hand, taking note of his firm grip. He liked him immediately.

"Pleased to meet you, Ripcord."

"Aw, just Rip—please," he responded with an easy grin. "I've grown to hate that nickname. My unit buddies gave it to me. Guess they thought it was funny."

The Swifts had agreed to engage a professional pilot to serve as Tom's second in command, able to take charge of the Flying Lab while Tom was occupied with an experiment or doing work elsewhere. In addition to serving with distinction in the Central European and Middle-Eastern conflicts, Hulse was an experienced jetliner pilot and came with a full security clearance. He had just completed a course that computer-simulated the finer points of flying the Sky Queen, but had never yet set foot within the craft.

"We're in the final checkout phase right now," Tom explained. "I'd like to introduce you to our key engineers and hangar mechanics before we lift off."

"That'd be great," he replied with enthusiasm.

Tom, Bud, Rip, and Mr. Swift ridewalked over to the great underground hangar, where Rip was introduced around. Though Tom maintained a stream of small-talk, his stomach was in knots and every muscle was charged. This was it!—the first crucial test of the Sky Queen in its natural environment, the sky!

Drawing Rip away from the others, Tom and his father told him some of the details of their secret mission to outwit the rebels.

Mr. Swift mentioned that though the leaders apparently had both sufficient money and scientific training to carry out their plans, it was suspected that they were holding certain top-notch Hemispak scientists from whom they had forced vital information under threats against their families.

"A bad situation," Rip agreed. "Maybe my background as a worker-bee in combat for Uncle Sam will come in handy."

"It may well," Mr. Swift replied. "And now for your preview of the Sky Queen."

About a half-hour later when they reached the second level of the mammoth ship, Tom unlocked the door to the laboratory and rolled back the fireproof panel. Rip stared in astonishment. Then, as they went from one laboratory section to another, he exclaimed:

"Oh man, this is fabulous! I've never seen anything like it!"

"You shore haven't," said a voice behind him, and Chow ambled in. Tom introduced him. "This ole lab," the cook went on, "has got more bottles than the biggest drugstore in the world. An' look at them tools!" He pointed to one wall of the laboratory. "If there's one missin' from that there collection—well, brand my cactus, I'll eat me a pound o' Texas sand!"

Another section of the laboratory was given over to numerous machines ranging from tiny scales to an ore crusher. Many of them were unknown to Rip, who shook his head in wonder at the neat arrangement of the manually and electronically operated devices.

"Tom, kin I show Rip the lights?" begged Chow boyishly.

"Sure. Go ahead."

Chow went from one battery of lights to another. The Swifts were amazed that he had picked up so much information from listening to the engineers when the various switches had been installed.

"Now this here little feller"—the cook pointed to a midget green bulb—"that one don't connect to nothin', jest needs impulses out o' the air to make it light up. An' this giant here—it's fearful powerful."

Tom explained that this was really the newest development of the Swift giant searchlight, a laser-like super illuminator, and that no one would use it unless he were wearing special lenses to protect his eyes. It was attached to a boom that could be extended into a small dome on the underside of the hull.

"Well, all I can say is, the millennium is really here!" Rip grasped Tom's hand as the group exited into the hangar. "I'd call this a scientist's dream come true."

Tension and excitement ran high at Swift Enterprises as news spread beyond the engineers and hangar crew that the giant craft was about to make its debut. After a last-minute checkup in the underground hangar, Tom threw a master switch on a wall panel. A warning horn sounded. As if by magic the roof slowly split in two. Huge gears lifted half the structure to one side, the other half in the opposite direction.

"Okay," Tom shouted to one of his engineers. "Ready for the elevator."

Slowly the hydraulic lifts pushed up the floor beneath the Sky Queen. When the edge of the floor came even with the ground level, the elevator stopped. Four rubber-tired tractors pulled the plane out to the flying field as excited cheers rang through the air, not only from the assembled Swift Enterprises employees, but from the distant onlookers outside the perimeter fence.

"What a beauty!" Rip exulted at the sight of the Flying Lab gleaming in the sun at last.

"It's even better than the underground preview, Tom!"

Engineers and workmen exclaimed over the giant plane as it was towed to a specially marked spot on the runway. The area, a quarter of a mile square, was made of special ceramic brick to withstand the blasts of the jet lifters.

The onlookers, standing at a safe distance to avoid any danger of being burned, cheered and shouted anew as Tom and the others went up the boarding rampway and through the main hatchway into the ship. All went immediately to their designated places. Tom took the pilot's seat, Rip the copilot's seat. Bud stood directly behind them. Mr. Swift had

decided to station himself in the laboratory where he could monitor the stability of the various chemicals, bottled liquids, and the electronic equipment, which now included the new Damonscope. As the electronic circuitry inside the walls interfered with televoc communications, everyone flipped on his intercom phones, and Bud took charge of the radio link to the plant, so that Tom could give his undivided attention to the test flight.

"Chow, are you in the galley?" Bud asked.

"Yo-ay, Bud. But brand my mavericks, I'm shakin' like a bowl o' jelly."

Before starting the ascent, Tom flipped on the audiogyrex system, which he had designed to eliminate the elevator sensation felt in rapid rising by using an inaudible mix of sound frequencies to "distract" the inner ear. Then, gripping the throttle, heart pounding in anticipation, Tom poured raw power into the jet lifters. As the deep growl of the jets slowly crescendoed, everyone waited anxiously for the first sign of motion.

"Load decreasing on the undercarriage pistons," Rip Hulse reported calmly, scanning the dials. "Ten percent remaining... three percent... boys, we're off and running!"

Bud burst forth with a cheer as the Flying Lab began to rise, first by inches, then with ever-increasing speed. In a matter of seconds it was shooting skyward.

"We're airborne!" Bud cried jubilantly. "Oh, man, did we leave old Earth in a hurry!"

The intercom from the laboratory section beeped. "Son, I think congratulations are in order," said Mr. Swift.

"Thanks, Dad." Tom's voice quavered. "But we've still to test her hovering capabilities."

At two thousand feet Tom eased off on the lifters. The mammoth craft stood still in the air, as if supported by an invisible giant's hand.

"We've done it!" Tom exclaimed, gazing down at the cheering, waving throng far beneath them.

"You've done it, Tom!" came the proud reply over the intercom. "Your invention is another great step in scientific advancement."

"What about the laboratory?" Tom asked.

"Everything took that sudden rise as well as we did."

Rip slapped Tom on the shoulder. "Mag-nificent! The new technologies you're proving here will be a great boon to the defense of our country," he commented.

Bud leaned forward. "I knew you could do it, Tom," he said quietly. "This super-skyship is just one step this side of a trip to the planets."

"Hold on! Not so fast!" Tom laughed. "Verano first."

Bud was now listening to Hank Sterling on the ground. He relayed the message.

"The crowd down there can't believe what they're seeing. And do you know what?" he added with a chuckle. "You've tied up automobile traffic for miles around! People are parked on all the roads, looking up at you."

Tom grinned. "We'll give 'em another show in a minute."

Assured that all parts of the plane were functioning smoothly, he phased down the jet lifters and applied the forward thrust. The Sky Queen accelerated smoothly, and Tom was pleased to note that his aeolivanes were functioning as predicted. As Bud watched the air-speed indicator he gasped. In a matter of seconds, it seemed, the Flying Lab was

cutting through the air at a thousand miles an hour.

"Great day!" he cried. "You could get around the world before sunset!"

"Better throttle back, Tom," Rip advised. "This is only a test."

"Right. I want to take her up higher, anyway."

To the spectators below, the big plane suddenly looked like a meteor in reverse. The lifters accelerated the Flying Lab so fast that it was out of sight in twenty seconds.

"S-stop—stop!" Chow shouted from the galley. "Brand my dogies, I don't have enough food fer a trip to Mars!"

"Then we'll stop off at the moon for supplies," Bud answered, giddy with excitement.

The plane's altimeter stopped at sixty thousand feet as Tom once again allowed the Sky Queen to hover. Not only Shopton but the clouds above Shopton had been left far below them. Even Lake Carlopa looked like a small, silver-blue crescent glinting in the morning sun, while around them in all directions was an indigo sky dotted with stars.

Abruptly a warning from Bud broke the reverie.

"Tom, we've got a problem!"

"What sort of problem?"

"There's smoke on the Lab's special runway. Hank thinks some of the ceramic bricks are on fire—whole sections of them!"

Tom couldn't believe his ears. "On fire? Bud, those bricks were made to take a temperature of—"

"I'm just tellin' ya what I hear, genius boy," Bud retorted.

As it happened, the fire below was not the only difficulty. The Sky Queen was beginning to noticeably list to one side, and was starting to lose altitude as well. Tom knew after a quick glance at the instrument panel that they were in trouble.

"What's the matter?" came Mr. Swift's anxious voice from the laboratory.

"I've burned out half the jet lifters," his son answered solemnly. "I guess the metal they're made of couldn't take that terrific heat."

Instantly he began shifting from the lifters, resuming horizontal flight.

"I'd better take her down immediately," he said. "No telling what other effects it may have had."

"Yes. Don't take any unnecessary chances," Mr. Swift said, adding, "Everyone fasten your safety belt."

Rip was frowning. "Is your runway long enough to land this big ship under horizontal power?" he asked, plainly worried.

"It wasn't designed to handle anything this big," Tom replied, "but—"

He quickly gave Bud a message to relay to Hank:

"Clear the field and prepare for an emergency landing. Jet lifters conked out. We're landing the hard way."

Mr. Swift came from the laboratory to watch operations. "Can you make it, Tom?"

"I hope so, Dad, but I may have to improvise a little." Tom gave his father and the others a reassuring glance. "Don't worry, folks."

Everyone sat tensely while he guided the great aircraft downward in tremendous sweeps,

like steps on a spiral staircase. As he turned into the traffic pattern of the Enterprises field, the airstrip looked frighteningly small. When the plane banked into the groove, Tom angled the nose of the ship sharply upward and briefly fired the remaining jet lifters, which acted against the direction of flight.

"Smart move," muttered Rip Hulse.

Bringing down the nose of the craft once again, Tom lowered the landing wheels and braking flaps. He then cut the forward thrust. The wheels touched the ground and the giant craft hurtled along the runway, brakes howling.

Could he stop it in time to avoid a disastrous crack-up? Tom wondered.

## CHAPTER 13

### CALLED TO WASHINGTON

"THE HAIRPIN turn! It's the only thing that will save us!" Tom murmured grimly. The runway was too short for the giant ship!

Immediately ahead of the ship was the wire perimeter fence, which would easily give way upon impact. But beyond the fence was a wooded, uneven area, miles wide, that could batter the Flying Lab to pieces. Calculating mentally at breakneck speed, Tom applied full left rudder and brake. At the same instant he gave the starboard engines a spurt of power.

In a flash the Sky Queen tilted and pivoted around, reversing itself. Tail foremost, it was still racing at great speed toward the fence. But now when Tom opened the throttle and gave the engines full power, the terrific thrust of the jets worked as a brake to overcome the momentum of the plane.

"Hold on!" Tom cried, batted against the back of his pilot's seat by the powerful forces. To make matters worse, he was no longer able to see where the Sky Queen was headed. Here's where we test out the automatic brain! he thought.

In a few heart-freezing seconds the ship rumbled at last to a stop.

No one spoke for some time. Then finally Rip Hulse loosened his safety belt and rose from his seat. Putting an arm across Tom's shoulders, he said:

"That, kid, was the greatest piece of flying I have ever seen."

Bud leaned forward. "Pal, it was superb! I thought we were dead ducks."

Mr. Swift added his praise. "If I ever had any doubts about your invention and the way you could fly it, Tom, they're gone now."

"Thanks," said Tom simply, adding, "What about Chow? I hope he's okay."

As they left the cabin to find out, they met the cook. His face was ash white and he was trembling. Seeing the others unharmed seemed to reassure him. As they filed outdoors, he said: "I'm sure glad to be on this here planet agin." Then his good humor returned and with a grin he added, "Even if it ain't good ole Texas!"

As Tom exited the ship's hatchway, his face downcast, a rolling distant sound, like the roar of surf, reached his ears. Looking up, his face slowly lit with pleasure. For blocks around the plant in all directions, the thousands of spectators were applauding, cheering, and wildly honking their car horns!

"Good grief!" exclaimed Tom to Bud with a disbelieving laugh. "They think it was all a planned demonstration!"

"Wave to your fans, genius boy!" chortled Bud.

By this time the ground crew, led by Hank, had arrived in one of the crash trucks.

"Thank goodness you're safe!" Hank cried. "Anybody hurt?"

Tom assured him that none of the passengers had been harmed and that the undercarriage had stood up to the strain admirably.

"I want it thoroughly checked, though," Tom said. He then explained that some of the lifters had burned out. "We'll need to replace the thrust chambers completely," he continued, "which is going to mean round-the-clock work if we're to keep to our schedule. Right now, I'll need to analyze a sample of those runway bricks and look over the graphs from our earlier metallurgical tests. Somehow we missed something!"

Tom spent the rest of the morning poring over graphs and printouts with Linda Ming and Arv Hanson. "The solution's got to be here somewhere!" he exclaimed in a moment of frustration. "The lifter models tested out perfectly in the test chamber."

"Tom, do you think..." Linda looked at him worriedly. "Could it be sabotage?"

"I guess it could be anything," replied Tom, frowning. "But if we don't solve this problem, the Flying Lab won't be going anywhere!"

Taking a break for lunch, Tom strolled over to his father's private office. After discussing the problem, Mr. Swift told his son that he had received an urgent message from Washington DC.

"It was relayed by our man in the State Department, Dr. Harold Tennyson—Rigoledo's friend. Officials down there seem to think Swift Enterprises has the ability to help keep the Western Hemisphere out of trouble."

Mr. Swift had explained that he really knew very little about the situation in South America, but Tennyson was extremely insistent. "I tried to tell him that I am a scientist and a businessman, not a politician, but he kept arguing and I gave in. I'll be flying down to Washington for a conference on the crisis in Montaguaya—the Verano rebellion."

"When are you leaving?"

"At once." Seeing Tom's expression, his father smiled. "Don't worry, I'll be back here by the time you've installed new lifters in the Sky Queen."

Tom spent the entire next day in the metallurgical lab, making various alloys of iron with titanium, tantalum, wolfram, and other metals of high heat resistance. These he carefully annealed and then etched in mineral acids to examine the crystal structure under a microscope. But when they were tested, each one failed to be an improvement over the material used in the original lifters.

Wearied and discouraged, Tom tumbled into bed late that night. But with the morning sun came an idea which so excited the young inventor that he leapt out of bed with new enthusiasm and was dressed for work within five minutes. "It can't be that simple!" he said to himself, accessing his laboratory computer remotely. "But—it is!" he cried aloud, staring at the screen.

Tom would have dashed out the front door without breakfast if his mother had not stopped him. She kissed him good morning, saying: "Not so fast, dear. I can tell from your eyes that you have solved the lifter problem, but you must eat before you go." Tom put an arm around his mother and accompanied her to the dining room. Over sausage and griddle cakes he explained what he had discovered. "Mom, it was the most common, silly mistake a person could make!"

"Those are the ones that are hardest to catch sometimes, aren't they?"

"Yep, you're right. The problem didn't have anything to do with the metal of the lifters at all! It's just that the computer spat out some erroneous specs, distorting the shape of the thrust chambers so the waste heat wasn't properly dissipated."

"So all you have to do is re-cast the chambers, is that right?"

"Exactly," he said. "Then we'll just switch 'em out—a day's work."

Driving speedily to the plant, Tom's long strides changed to an eager run as he neared his private workshop-laboratory. Few mechanics had arrived for work yet, but by the time Tom had calculated the last mathematical detail of the design correction, Arv and Linda had come into the laboratory.

"That was a masterful idea, Tom, taking a second look at the printed specs," said Arv.

"And it was so simple too. Why didn't I think of it?"

Linda gave him a bland smile. "Because after all, Arvid, you are not a Swift."

Tom hurried off to order the new jet lifters fabricated at once. He summoned the foreman in charge of the machine shop, who promised to have men working around the clock to complete the lifters and install them.

"But it will take a couple of days," the foreman said.

"A couple?" repeated Tom in disappointment.

"I meant, a couple—starting yesterday!"

That evening Mr. Swift telephoned his family. He was delighted to hear that Tom had conquered the sole weakness connected with the Flying Lab. He also said that what he had learned in Washington involved a complicated and serious menace to the United States as well as to all of South America.

"There's a technological element involved which I can't discuss. Our Senator and his committee want me to go to Montaguaya at once, accompanying a small group selected by Tennyson. Unfortunately, I'll have to change my plans about flying with you, Tom. I'll meet you down there."

"Where?"

"I don't know. I'll be in touch with you by encrypted message."

"Dad?"

"Yes?"

"Where did you propose to Mom?"

Tom could sense Mr. Swift smiling at his end of the line. "During a tour of the Regnier Chemical Works. And thanks for being cautious enough to test me—I might well have been a phony with a voice-mimicker."

While waiting for the lifter work to be completed, Tom was restless. As he paced the

auxiliary lab of the underground hangar, Bud suggested that he try to solve the mystery of the symbols on the strange missile from parts unknown. "I guess I forgot to tell you, Bud," said Tom, "that I think I've made some more progress on it."

"So what does it say?" Bud asked.

"I can't quite tell you that just yet, but I think the cluster of symbols next to the two triangles represent nine radical solutions to the basic tensor equations for—"

"Ohh-kay. I'll let it rest there." Bud grinned. He left his friend. Several hours later when he met him again, Tom had to admit that he had not made any further progress on interpreting the strange symbols.

"I guess solving it will have to wait until we get back from Verano," he said.

"When do we leave?" Bud asked.

"As soon as we make a successful test hop," Tom answered.

Bud asked if Tom were going to take anyone on the trip in place of his father. Tom said he had already made arrangements with Arvid Hanson.

Two days later the Sky Queen was finally ready for its second test. This time Tom chose to make the test after midnight to minimize public view. After the take-off, he put the plane through a series of tortuous maneuvers for over two hours. The Sky Queen came through with flying colors.

"Now I'm going to try for an altitude record," Tom said to Rip and Bud.

With the instrument panel indicating that the refitted lifters were working to perfection, Tom poured oxyhydraulic fuel into the roaring engines. The altimeter swung up, up, up—ten, twenty, fifty, eighty thousand feet! It kept soaring higher and higher! The curvature of the planet beneath them was now plainly visible, and the star-laden sky was silky black.

"Tom, we're higher than man has ever gone in a jet plane!" Rip cried. "You're in rocket territory now!"

"Do you think it's safe?" Bud asked apprehensively. "If we go much higher we'll be hurled right out of this world! I can see the headlines—Tom Swift Adrift In Space!"

"Don't worry," the excited pilot replied. "This is as high as we're going for the time being. Is the pressure system okay?"

Bud checked the dials on the big panel. "Tight as an eleventh-inning ball game," he replied.

"Then we'll sit up here for a while," Tom said. "I want to test the automatic stabilizers."

The Sky Queen hung in space while the pilots and the other crew members had sandwiches and hot drinks on the lounge deck, sitting like passengers on a luxury ocean cruise and enjoying the majestic view through its wall-high picture-windows. Half an hour later Tom said he was ready to descend.

"I'd advise you not to drop too fast, Tom," Rip spoke up. "You know atmospheric friction plays strange tricks."

But Tom brought the Sky Queen down as easily as if he had been flying an ordinary plane no higher than the clouds. The test flight had been a stunning success!

That evening at the Swift home Sandy and her friend Brynna arranged a gay bon voyage

dinner party. Bashalli Prandit was there at Tom and Bud's request, along with Rip Hulse, Bud Barclay and a number of Enterprises employees, including Roberts the hangar night watchman. When the party was about to break up, he called Tom aside.

"I just wanted to say again how grateful I am to you and your father," Roberts said humbly. "Thanks for the second chance."

"By the way," Tom asked, "have you heard anything from your son lately?"

"Not a thing. His wife is extremely worried. I hope you find out something about him while you're in Montaguaya."

"I'll certainly try," Tom promised. He didn't tell Roberts that locating his son's lost party was part of the reason for the Swift expedition.

Early the next morning, as the expeditioners prepared to board the Flying Lab, Mrs. Swift, Sandy, and Hank Sterling's wife and young son were on hand to wish the travelers Godspeed.

"Do be careful, Tom," his mother begged, "and don't take chances. I know that sounds like boring motherly advice, but maybe you'll remember it. Oh, one more thing—"

She took a small, neatly wrapped package from her purse and handed it to Tom.

"A very sweet young lady with an accent dropped it off at the house last night. And don't worry, it's been x-rayed with that detector machine of yours."

Tom grinned and hugged his mother. "I'll bet it's just the thing for a snack in the stratosphere, Mom. If you happen to pass by The Glass Cat, tell her I said Thanks!"

Tom, Bud, Rip, Chow, Hank Sterling, and Arvid Hanson climbed aboard the gleaming ship. They stood in the open doorway a moment to wave good-bye. Then the hatch panel folded upward and sealed itself shut.

Soon the great lifting engines roared to life. Minutes later the mighty Sky Queen was off on her maiden trip!

## CHAPTER 14

### THE BOGEY AND THE CHUTIST

IN LITTLE OVER two hours the Sky Queen was flying above the Caribbean, nearing the coast of Costa Rica, which they would cross en route to the South American mainland. A short time later, Central America behind them, the stratoship was over the Pacific Ocean. At the prearranged point Tom banked the Flying Lab and headed inland. Soon they were running along the spine of the mighty Peruvian Andes, leading them to their destination.

"Bogey on the radarscope!" Rip suddenly announced. "A plane's coming at us from two o'clock, closing fast!"

As Tom maneuvered the ship out of the way, he caught a glimpse of a sleek European jet fighter as it flashed across the nose of the Sky Queen. It was slate-gray in color and bore bright red markings.

"That guy must be crazy!" Bud howled.

"He may be crazy, but he's making deliberate passes at us," Rip warned. "Here he comes again from eleven o'clock."

"He's firing on us!" Bud cried, as a bullet careened against the hull below them. "If he puts a hole in this pressurized cabin, we'll be gone geese!"

Already Tom was arcing the ship skyward, getting more altitude, as Rip grabbed a pair of electronic binoculars and studied the rogue jet, which was now circling like a vulture far below.

"Tchernou 4-041, manufactured by the Hungarians in 1990," he declared crisply. "It's their high-tech fighter model, but this one's been modified—it's a snagger-tooth."

"What's that?" asked Tom, his voice tense.

"That means it's specially equipped to snag materiel directly off the runway without landing," Rip explained.

Meanwhile Bud, at the communications console, had been attempting to contact the pilot. "No response. Shall I try to raise the Peruvian authorities?"

"Not just yet," Tom replied. "It's possible this is some sort of mistake. It's happened before."

"Look—he's broken pattern!" exclaimed Rip, nodding toward the radarscope. The blip was no longer circling but appeared to be headed westerly, toward the ocean. Was it a ruse to lure the Sky Queen back within range?

Suddenly a slight shudder passed through the ship. "Getting a little turbulence," Bud commented. "High-altitude effects?"

Tom's eyes surveyed the instruments. "I'm not—" His thought was interrupted by a warning beep as an indicator light began to flicker. "We're losing pressure in storage cubicle five on the bottom deck!"

"I'll say we're losing it," Rip Hulse muttered. "We're leaking like a sieve! Now we'll have to take her down."

Tom stood up from his chair, tearing off his headset. "Rip, you and Bud take over. I'm going down there to see what we're dealing with."

The young inventor clambered down the inter-deck stairway, pausing only long enough to grab an emergency oxygen mask and fit it over his face. A Swift invention, the mask in-pumped, filtered, and compressed atmospheric oxygen, thus eliminating the need for an airtank.

Tom reached the sliding access panel for the cubicle in a run. Peering through a small porthole in the panel, his worst fears were confirmed. The loading hatch in the floor of the cubicle was yawning wide open!

"Good night, no wonder we're getting vibration and pressure loss!" he said to himself. Intercomming the control deck, he briefly outlined the situation and inquired as to exterior air pressure and temperature.

"We're low enough down now; air pressure is satisfactory," came Bud's reply. "But it's freezing cold out there, Tom. Shall we continue descending?"

"No. Hover at constant altitude. I don't want to make things too convenient for our attacker. Before I go into the cubicle, I'll slip on thermal gauntlets. That should protect me for the few seconds it'll take to secure the hatch."

Donning the gauntlets, Tom slid open the panel doorway, and then closed and

pressurized it behind him. Like all such internal doors in the Flying Lab, the door doubled as an airlock, consisting of two airtight panels separated by just enough space for a man to stand.

Bracing himself against the wind and cold, Tom popped the seal of the inner panel and slid it aside. An icy blast almost knocked him back into the airlock. He squinted his eyes, forcing his way forward toward the hatch cover, which was leaning at an angle against a bulkhead. He grabbed its heavy bulk and yanked it forward to slam it closed. Suddenly an unseen figure pounced from the shadows like a jungle cat! Wearing a thermal garment and pressure mask, he viciously elbowed Tom aside and threw himself through the hatchway into the bright blue sky below. For an instant Tom saw the falling man gliding away into space, silhouetted against the snow of the Andean peaks.

As Tom struggled to regain his balance from the unexpected shove, the Sky Queen gave a lurch. The violent motion, coupled with the suction caused by the air rushing past the open hatch, threw Tom flat on his chest and nearly catapulted him out into space.

With every ounce of strength he held on to the base of a stanchion with one hand and gripped the edge of the hatch with the other. There was an intercom phone only a few feet away. The handle to close the hatch was just above him. But both of these were as far out of Tom's reach as the moons of Mars!

The landscape whirled crazily below Tom, who was beginning to feel faint. Inch by inch he was being drawn through the opening. With his last bit of reserve energy he dug his toes in and forced himself back.

But it was no use. As fast as Tom pulled back, he was sucked forward again. I'm losing it, he thought.

Then in his last moment of consciousness he felt strong arms close around him, jerking him backwards. There was a clicking sound. The door to the hatch had closed.

"Tom!"

It was Hanson's voice. He turned the young inventor over and shook him. "Tom!" he cried again.

In a moment Tom's senses returned. He looked at Hanson gratefully, and in a weak, hoarse voice thanked him for the rescue. Presently he sat up.

"What happened?" Hanson asked. "Who opened the hatch?"

"One of our passengers," Tom replied, panting. "An uninvited one."

"Who was it?"

"I don't know. He jumped."

After applying a salve to some bruises he had received, Tom made his way back up to the cockpit, where he gave a full account of what had happened.

"Crazier and crazier," Bud cried. "And we don't even know which of the enemy groups he was with."

"Or what he was after," added Rip Hulse.

"Say," said Tom abruptly, "I doubt this guy was committing suicide. I got a glimpse of straps for a parachute harness. Maybe he's still in the air!"

Bud initiated a wide radar scan. "He's not down yet," he reported in a few moments.

"The winds are carrying him to the southeast, and he's coming down nice and easy."

At this announcement Tom felt a surge of returning strength. "Tail the guy," he directed Rip. "We'll just creep along using the lifters. I'll bet he's using a maneuverable parachute system, and I want to see where he comes down."

"Ten to one it's the rebel territory in Verano!" Bud remarked.

Within three minutes they could see the chutist dangling less than a mile ahead. "Maybe we could give him a shave and a haircut with our main jets," joked Hank Sterling, who had come down to join the others on the command deck.

Rip Hulse shook his head. "We're not going to have a chance. Here comes our friend again."

Peeling off the distant horizon, the mystery jet now came at the Sky Queen like a javelin from below. As it roared past, the ship echoed with the impact of aerial bullets. Tom throttled up the lifters in response, and the stratoship zoomed skyward.

Through the downward-slanting portion of the viewport they watched in fascination as the jet neared the descending parachutist. An armlike tubular boom, with a grappling "claw" at the end, was now deployed from the belly of the fighter. At the last moment the craft veered sharply upward.

"Snagged him!" Rip shouted. "Now that snagger will fold in on itself and carry him into the hold of the jet."

"At least we can chase him!" Bud urged.

There was a silent moment. Then Tom said, "No. Let's inform the authorities in Peru and Montaguaya—and the U.S. State Department. But we don't need an international incident holding up the expedition."

Returning at last to full horizontal flight, the stratoship resumed its course toward Cristobal, the capital of Montaguaya. Soon the high peaks gave way to the lower coastal range, and in minutes the Sky Queen was hovering at twelve thousand feet above the narrow valley that enclosed the city on three sides.

"We greet you, Swift expedition," came the voice of air traffic control at Cristobal International Airport. "Here are your coor-dinates."

The Flying Lab made its way on lifter power toward the airport. Lacking a runway of thermal-resistant brick, the authorities had arranged for the ship to set down on a large, disused concrete slab that had once been occupied by a warehouse complex. Tom was uneasy when he noted how close the landing area was to re-sidential housing.

"Tom," Bud called out, "something's interrupting our radio contact."

"Static effects?"

The question answered itself as a new voice made itself heard over the headphones.

"Tom Swift, Swift Sky Queen, listen carefully. Do you read?"

Tom cautiously confirmed, and the voice continued:

"Then I think you will like to know this. An explosive device has been placed aboard your aircraft. You are now at two-thousand three-hundred feet. If you descend below two-thousand feet, the device will automatically activate itself and blow your plane to—what do you say?—the smithereens!"

## CHAPTER 15

### DEADLINE: DESTRUCTION!

"WHO ARE YOU? What is it you want from us?" demanded Tom Swift over the microphone, having matched the incoming frequency.

"Excellent questions," answered the voice. "To the first, I say nothing. To the second, I answer the question with one of my own: What is your business here in Montaguaya?"

"We're on a scientific expedition. I imagine you already know that we're testing an experimental device to locate radioactive ore, as well as testing the capabilities of the new aircraft."

"And along the way, you happen to be aiding the government in its campaign of oppression against the Puyachay indios," declared the voice.

"Listen to me," said Tom firmly, "we're not here as politicians. That's for others. You're holding some members of Hemispak captive; release them to us and we'll leave immediately."

Tom could sense a sneering tone in the response. "Oh, I think not, young genius professor. You will be leaving sooner than immediately! I wonder, how long can your miracle-ship stay in the air before it runs out of fuel? Another hour, another day? Now I say to you, farewell and viva los Veranistas!"

"He's broken off," said Bud.

"It's your call, Tom," Rip Hulse declared softly. "What do you want to do?"

The young inventor tossed aside his headset and ran his hand through his hair.

"Depending on various conditions we have fuel for about three more hours of continuous use of the jet lifters, and maybe forty more minutes for the main jets. Of course we could double that by using only two of the four engines at a time. If we have to ditch the Sky Queen—" Here a look of agony crossed his face. "—then it would be best all around to do it in the ocean, which is... do-able."

"Obviously, we have to get away from the city," said Hank Sterling.

Tom nodded silently and grasped the throttle. The ship ascended rapidly toward the clouds, while Bud explained the emergency to the airport control tower. At twenty thousand feet, Tom throttled forward on the main jets and guided the Queen at half-power toward the Pacific. When they were several miles from shore, with no boats beneath them, Tom descended to three thousand feet and resumed hovering on the lifters.

"Luckily there's just the few of us on board," he said. "We can transfer to the Skeeter and the Kub, then fly on, maybe to Chile..." His voice trailed off listlessly.

"Man, would I love to pound those rats!" Bud burst out.

Rip Hulse stood up. "There's another possibility, of course. We could try finding and deactivating the bomb."

Tom nodded. "And we have some clues as to where it is, I think. Remember, just before takeoff Security went over the inside of the Queen absolutely thoroughly. Admittedly, they managed not to find a whole person; but a person, unlike a bomb, can move around

nimbly and take advantage of areas already searched."

"Then you don't think the device is actually inside the fuselage?" Sterling asked.

"Right," replied Tom. "In fact I suspect it's fastened to the underbelly of the ship somewhere. After being activated by its internal timer or a signal, it probably uses an air pressure sensor to determine when the ship passes the two-thousand-foot mark—assuming he's not just toying with us."

"Okay then, it has to be outside," Rip agreed. "But where exactly?"

In his mind's eye Tom reviewed the blueprints of the Flying Lab. To prevent the device from being discovered prematurely, it would have to be somewhat hidden, or made inconspicuous. But the underside of the craft was designed to be an effective lifting surface, and thus was perfectly smooth. Indeed, anything attached to the outer hull would disrupt the airflow and be detected almost immediately. Furthermore, an object fastened in those places would stand out visually.

Unless...

"It's camouflaged!" Tom burst out excitedly. "The device is painted to blend in with the American flag decal on the upsweep of the hull, just beneath the viewport here!"

"Sure!" said Bud. "Because of the pattern there already, the bomb and its shadow wouldn't catch the eye."

"Great symbolism, kids," commented Rip. "He blows up the American flag, plus he shreds everyone at the controls!"

"And right under our nose all the time—literally!" Hank added.

"Hank, take my place here," Tom directed. "C'mon, Bud. I want to eyeball the situation in the Skeeter."

Tom and Bud scrambled down to the Flying Lab's hangar deck, where the jetrocopter rested in its hydraulic cradle. Taking their places aboard, Tom activated the hangar door controls by remote signal. Instantly the deck below began to slant downward, while the wide door panel swung upwards. The ocean gleamed below as the cradle swung the Skeeter out into the open air, far enough from the fuselage for the rotor blades to be used. Tom gunned the engine and the midget craft lifted smoothly away from its restraints.

The young inventor guided the jetrocopter forward along the length of the Sky Queen, carefully avoiding the backwash and heat from the jet lifters. "Coming up on the nose," he radioed.

"We can see you now, chief," came Hank's voice in reply.

Tom swung the craft around so the pilot's dome would be facing the Flying Lab's fuselage. "I see it!" cried Bud. "Right where you said!"

A round, flat object, about the size of a dinner plate, was affixed to the upper left corner of the large flag decal. It appeared to have been expertly painted, and was perfectly positioned amidst the stars and stripes.

Tom's eyes darted back and forth. "How close do you think we can get to the hull?" he asked Bud.

"The rotor limits it."

"True," Tom said, thinking hard. "But the tail extends beyond the radius of the blades!" "Yeah, but what—" Bud's eyes widened. "Tom, you're not thinking of trying to crawl over!"

In answer Tom began to slowly pivot the Skeeter. In a moment the tail section of the craft—which, unlike most choppers, lacked a secondary rotor—was banging lightly against the hull of the Sky Queen.

"What's going on out there?" demanded Rip Hulse over the radio. "All we can see is your front end." Bud, ashen-faced, did not bother to reply. He looked at Tom as the young inventor unlocked the cockpit hatchway and leaned forward. Then, abruptly, Bud grabbed Tom's safety harness and yanked him back into his seat.

"Bud—!" Tom protested.

"I'm stronger, pal," declared Bud with a wild grin. "I'll knock you out if I have to!"

Bud kicked open his own hatchway and swung his legs around, pausing for a moment to activate his televoc pin. "Keep in touch, genius boy!"

Muscles flexing, Bud stood and twisted his body around, grabbing at an emergency rung on the top of the Skeeter. He pulled himself up and wriggled onto the roof of the cockpit section, lying perfectly flat. "Man," he televoc'd, "those blades are cutting it kind of close!"

"Make like a snake, Bud," said Tom.

"Don't worry!"

Bud slowly worked his way back along the tail section, moving toward the hull of the Sky Queen. He knew that if he should become dizzy or lose his grip, the three-thousand-foot dive into the Pacific would be fatal.

"Tom," radioed Hank Sterling, "we've only got a little more than an hour of lifter-time remaining. I hate to say it, but wouldn't it be better to come back inside and start the evacuation process?"

"No!" hissed Tom. "Just keep the ship nice and steady!"

"Okay, Tom, I'm at the end of the tail," Bud televoc'd. "The bomb is a little out of reach. Think you can take her up about four feet?"

"Done," responded Tom, accelerating the rotors very slightly, then quickly slowing them again to hover-rate. The tail of the jetrocopter rasped along the Flying Lab's fuselage. Suddenly a slight jolt ran through the Skeeter!

"Bud!" cried Tom. "All right?"

"Steady as she goes, Skipper," replied the quavering voice. "We've bounced a little apart. Just hold it—I'm going to stand!"

Bud thrust the toes of both shoes under the rungs he had been using to hold on to. Then with a gulp he rose to his feet and leaned both hands against the cold hull of the Sky Queen. The bomb was now at chest level.

"Bud?"

"I'm up," he said. "Just doing a little dance with the palms of my hands as we shift side-to-side. What do you want me to do?"

"Try to take a look at where the device touches the hull. See any daylight?"

Suddenly aware that his palms were sweating and might well start sliding, Bud pressed his cheek against the Queen's hull. "It's separated from the hull just a little. I can't see all the way through, but... I think I'm seeing globs of glue or something."

"Okay, it's cemented on—quick and dirty."

"Want me to try to pry it off?"

"No!" shouted Tom. "It might go off in your hands as soon as it breaks contact. Look behind you. See that u-shaped docking ring?"

Bud twisted his head and looked. "I see it. Just a couple feet back. Part of the coupling assembly for the hangar cradle."

"Right," Tom replied. "Now there's also a flat metal brace in the middle of the ring, bent at the end at about a 45-degree angle. See it?"

"Yep."

"It's adjustable and geared up to a motor. I'm going to extend the brace from inside the cockpit to its greatest length. Is it moving? Tell me when it stops."

"It's stopped, Tom."

"At that extension it's not very stable. Pull it toward you with slowly increasing force. It should give fairly easily, and twist free of the ring as well. But Bud—don't yank on it, like you did on me!"

Bud feigned a weak laugh. "Right." There was a long pause. Suddenly a ping! echoed through the craft. "You were a little optimistic, pal, but it's in my hand."

Tom explained the rest of his plan. It took Bud a few minutes to comply, and another few minutes to worm his way back into the cockpit. Finally he plopped down into the co-pilot's seat.

"Nice to see you!" said Bud. He turned away, but Tom could see that he was white and trembling. "So when do we leave?"

Tom gunned the jetrocopter and pulled away. As he rotated the craft, he formed a clear mental image of the bomb device. The angled section of the flat metal brace-bar, which was only as thick as three playing cards, was solidly jammed into one of the glue-free spaces separating the disk from the hull. It stuck out into space about two feet like a lever or crowbar.

Tom inhaled sharply. "Hold on." Rotating the Skeeter again, he backed it up toward the Flying Lab, using a radar sensor to make certain that he approached no closer than a foot or so. "Here goes!" he cried.

Shifting the rotor axis, Tom caused the jetrocopter to dip its tail, clanging against the protruding bar. In his mind's eye he could see the sturdy bar prying the bomb off the hull, cracking its cement and sending it tumbling through the air. In the same instant, Tom gunned the Skeeter's forward jet. The craft lurched forward.

There was no explosion. Had the maneuver worked at all?

"Over there!" cried Bud, looking downward. "It's falling!"

Suddenly the Skeeter and the Sky Queen were rocked by a powerful blast!

"Two-thousand feet," Tom declared grimly. "Give or take a dozen!"

Tom made a wide circle, passing the command deck viewport as he did so. Rip, Arv, and

Hank waved jubilantly and flashed him the victory sign.

As the jetcopter made its final approach to the Flying Lab's hangar, Bud broke the silence. "Tom?"

"What?"

"I have something to tell you."

"What is it, pal?"

"You may not believe this, but—that was the very first time I ever did that!"

## CHAPTER 16

### GOVERNMENT GUESTS

TOM AND BUD entered the Flying Lab's cockpit to a chorus of whoops and backslaps from Rip Hulse, Hank Sterling, and Arvid Hanson.

"Brand my foghorns, what's all the hubbub up here?" came a growly voice from the doorway.

"Chow!" Tom exclaimed. "Where have you been?"

The weathered ranchhand was rubbing his eyes. "Wa-aal, I heard tell about that there jet-lag, so I figgered I'd beat it with some shut-eye on my bunk. Then I thought I hear't thunder, so's I got up to see. So are we there yet, boss? In Monta-whatcha-callit?" Chow yawned and stretched.

Tom squeezed his shoulder affectionately. "Pard, we got quite a story to tell you!"

After recounting the details to Chow and the others, Tom radioed Señor Rigoledo in the government offices in Cristobal, providing a shortened version of the crisis.

"Most disturbing!" said Rigoledo. "All things considered, perhaps it would be best for you and your ship to return to the United States. It is pos-sible that we will be able to negotiate the release of the Roberts party on our own. There have been several exchanges of prisoners over the years."

"I intend to continue, Señor," Tom replied firmly.

"Then let us proceed with caution," urged Rigoledo. "Do not land at the airport in Cristobal. Our army maintains a base in a small and secluded cañon perhaps twelve kilometers distant. There is room for your ship to make a vertical landing there, in a cleared area. We will announce to the press that you have returned to your country in view of unforeseen difficulties."

Tom couldn't help but frown, though Rigoledo wasn't there to see it. "I don't like misleading the public."

"But it is necessary," concluded Señor Rigoledo. "At any rate, your party is not known by sight, so there is no harm in driving you to the city, where you may wish to sight-see. This night, perhaps you will do me the honor of dining with me at the University of Santa Honore, our national institute. Only the most trustworthy of the faculty will be present, I assure you."

Tom accepted politely. Then he asked, "Incidentally, have you been in touch with my father and the group from our State Department?"

"To be sure," responded Rigoledo. "They arrived last night and left again very early this

morning, all of them together. They are traveling by highway to a mountain town, Alta Bapcho. But you will not worry, please. A squad of police accompanies them in unmarked vehicles."

"Did my father have any message to relay to me?"

"Only his love, and his hopes that your flight was a comfortable one."

After Señor Rigoledo signed off, an assistant provided Tom and Rip with the precise route coordinates for their new destination. They reached the army base without further incident, setting the Sky Queen down on a hardpacked dirt parade-ground near the barracks. Several official government cars, polished and new, awaited to transport them to Cristobal.

"Maybe I should stay behind, Tom," Arv Hanson volunteered. But Tom shook his head. "I don't think it's necessary. The ship will be electronically sealed, and we'll be signaled automatically if anyone tries any monkey business. Besides," he continued, looking around, "these soldiers look more than capable of protecting her from any rebel attacks." Señor Rigoledo's estimate of twelve kilometers turned out to be "as the crow flies." The trip to the city wound back and forth down narrow roads and up sheer mountain passes for more than two hours before the three-car convoy had passed the city limits. But it was not a waste of time, for Tom and the others enjoyed a colorful telling of the centuries-long history of the country, of its dictators and revolutions and the eventual adoption of the present democratic system. All the drivers spoke excellent English with a slight British accent.

Cristobal proved to be a study in stark contrasts. Late-model cars screeched with horns blaring around llamas with saddle-packs. There was much poverty, and the streets thronged with beggars. But there were also modern skyscrapers, and the Old City preserved the decaying splendor of the era of the conquistadores.

As they left the business district behind and drove through a hilly section of the city, they found themselves surrounded by large residences with high walls, as well as gated suburban-type tracts.

"Armed guards everywhere," Bud commented to Tom. "Guess it's not easy being rich in a country like this."

"It's not easy being poor, either, Bud," Tom replied dryly. "Most of those people we saw on the street looked malnourished."

"Maybe your uranium finds will help this society," Bud responded thoughtfully. "That is, if we can help them put down the rebels."

By prior arrangement the three government cars came to a stop in the Plaza of the Heroes, in front of the National Museum. Travelers and drivers exited to stretch their legs. It was mid-afternoon, and there was time for sightseeing before checking into the Palacio del Colon, Cristobal's finest hotel, where the group would spend the night. They were not due at the Universidad until 7:30 PM.

"I think I'll take in the National Library," said Tom.

"Arv and I have decided on the Areña Desportes," Hank Sterling declared. "The Sports Arena. And other such educational pur-suits." Rip quickly fell in with them.

Bud decided that he wanted to be driven to the hotel to shower and change before walking about the city.

"How about you, Chow?" asked Tom.

"Oh, don't you worry about me," the Texan replied with a mysterious wink. "I got me some ideas. I'll meet you fellers back at that big hotel."

"All right," said Tom. "You all have your televocs in case you run into trouble. Try to stay within the three-mile range."

"Man, this whole city's in range," Rip Hulse remarked.

As agreed, the entire group met back in the lobby of the hotel at 5:30—all but Chow. In his place was his driver, Ramon, carrying a load of bags and packages. "Mr. Winkler wanted to shop for some most particular items," Ramon explained. "He made his purchases very quickly, and asked me to drive them to the hotel and have them delivered to his room while he did what he called 'moseying.' I told him I was not permitted to leave him behind, and I thought he understood. But as I was placing his purchases in the auto I saw him go by in a local taxi. He waved at me!"

Bud grinned and slapped Ramon comfortingly on the back. "That's our guy! Don't worry about it."

But it was Tom who was worried. He activated his televoc and spoke aloud, so the others could hear. "Chow? Do you read me? This is Tom."

"I know it is, boss—I kin see you with my own eyeballs!" Chow had come up behind the group while they were talking.

"Where have you been?" Tom demanded.

"Oh, here'n there, y'might say," answered the Texan. "Thanks for playin' mule fer me, Ra-mon. I'll put in a good word." He grabbed up his bags and headed off toward the elevator.

"Well," said Tom, mystified. "I guess that's that!"

An hour later the group was gathered again in front of the Palacio, all looking fresh-pressed and handsome in the expertly tailored tuxedos provided by Señor Rigoledo's ministry, which had been waiting for them in their rooms. Again, Chow was late.

"Now where is he?" asked Arv Hanson, slightly irritated.

"Great day!" exclaimed Tom. "Get a load of what's coming!"

It was Chow of course. He wore his tuxedo trousers as provided, but the rest of his outfit, from boots to bolo-tie to ten-gallon hat, was definitely his own unique concept of formal wear. Most alarming was his shirt, shimmering with a multiplicity of bright colors and angular patterns. Strangely enough, the effect was entirely pleasing, if not entirely dignified.

"Are you trying to get us deported?" Bud cried in good-humored anguish.

"Please, Budworth, my boy," replied Chow with mock hauteur. "I'm jest aimin' to give these folks a right proper impression!"

The dinner at the University was a great success, capped by the unexpected appearance of Jaime-Carlos Fernans y Zuniga, the Presidente of the Republic, a tall, courtly octogenarian with iron gray hair. "It is greatly with honor, and with hope, that we greet

our scientific friends from the North," he said in halting English.

Hank Sterling sidled up to Tom and inconspicuously drew something from his pocket. It was the Montaguayan dollar, the altaesito. "Look at this, chief," he said. "An engraved picture of the first president of the Republic, who is also the only president of the Republic." The picture was of a very young President Fernans.

"Stability," Tom remarked.

"To say the least!"

As Tom was about to enter his car for the ride back to the hotel, he hesitated and strode over to Rigoledo. "This was a wonderful honor," Tom said, and Rigoledo beamed. Then Tom added, "But I'm still a little concerned about my father. Can you tell me anything about what he and the others are doing?"

Señor Rigoledo looked sympathetic but shook his head. "I am responsible to my government, and can say nothing more than what you already know. It is a sensitive matter involving both Montaguaya and the United States, and your father brings to the table a certain expertise lacking elsewhere. I must ask you to be satisfied with that for now. But I tell you what," he added, "if it is permitted I will try to arrange for you to speak with him by radio, perhaps from your Flying Lab."

"I'd be grateful for that," Tom responded, shaking Rigoledo's hand.

Tom was the last to arrive back at the Palacio del Colon. As he left the elevator on the floor that was reserved entirely for the Sky Queen party, he was surprised to find the others gathered in the hallway.

"What's up? Is something wrong?"

"Chow's been holding out on us," said Bud. "He's discovered something important."

Tom shifted his gaze to Chow, who had loosened his vest and was puffed-up with pride.

"Y'see, Tom, when I left Ramon behind, t'weren't jest orneriness. I had me a plan."

"Where did you go?"

"To the big airport. See, I got to thinkin'-like. That jerkface on the radio, I figgered he'd want to see what was happening, y'know?"

"Of course!" Tom exclaimed. "He'd be in, or at least near, the airport. Maybe even work there!"

"Now yer cookin'. So I hightailed it over there an' spent some hours nosin' around. I speak Spanish like the best of 'em, cause o' livin' most of my life near the Rio Grande. I was right subtle, like a reg'lar detective."

"What did you find out?"

Chow's face broke into a big grin as he spun out his story slowly, for dramatic effect. "I remembered ever'thing you and Rip said about that mystery jet, the one that snatched up that parachute guy. Now, if'n I was a jet, where would I go? Can't land like the Queen in some little corral. No sirree. Pretty much had t'be the airport. So I asked a little here an' a little there—"

"Chow!" interrupted Tom, "What did you find out?"

"That's what I'm tryin' to tell you, boss. Brand my spyglass! That plane you're lookin' fer is right there in a hangar at the airport! I know, cause I saw it myself!"

## CHAPTER 17

### AN ASTONISHING DISAPPEARANCE

"YOU SAW the jet?" Chow's revelation left Tom almost speechless!

"Sure did, with these two eyes o' mine. One of the runway jockeys pointed me in the right direction—a big private hangar, numero 18-Norte they call it. So I took me a little stroll on the roof—"

"On the roof?"

"Well sure, cause it was flat, mostly, and had some skylight winders along the top. So I wiped a little section clear..." Here Chow acted it out. "An' I looked down inside. Sure enough, thar she was! Mos'ly gray, but with special markin's on the side, color o'—lemme see—" He pointed at a red splotch on his shirt. "Like that there."

Rip Hulse was grinning. "It sure matches the coloration of our phantom attacker.

Cowboy, ya done good!" Chow beamed at the compliment.

Tom nodded his agreement, but with furrowed brow. "Yes. But listen everybody, Enterprises needs you and—I need you. Nobody expects you to take chances like that."

Bud looked innocent. "Chances? Us?"

The excitement over for the evening, they all returned to their rooms. Tom, after some thought, made a call to Señor Rigoledo at his private mobile number. Rigoledo promised that the Cristobal police would immediately lock down the jet and take its owner into custody. "And then we shall commence a thorough investigation," he concluded. Tom was satisfied for the moment.

The next morning, following a hearty Latin-style breakfast, the Swift party stood in front of the hotel preparing to depart Cristobal. Chow pulled Tom aside.

"Boss, I been thinkin'. How's 'bout if I stay here in the city for a couple more days?"

"But why?" asked Tom, very surprised.

"Well, I sorta made some friends over at that airport, whatcha call contacts. I think I jest might be able to find out some more about the gang that owns that jet. Mebbe I kin find that parachute guy!"

"Chow, will you promise me to avoid risky situations? And bring in the police when you have something?" insisted Tom.

Chow held up his right hand. "On my honor as a Texan an' a prairie cook!"

Tom laughed and said, "That's got to be good enough!"

When Tom and the others finally arrived back at the army base, they were relieved to find the Sky Queen just as they had left it. After a quick check of all onboard systems, Tom thanked the base commander and boarded the majestic stratoship. Soon the Flying Lab was roaring toward the clouds.

"What's the program today, Tom?" asked Rip Hulse from his copilot's seat.

Tom clipped a printed sheet onto a holder next to Rip. "These are the air routes over Verano we've been authorized to follow. Rigoledo feels the government's recent offensive in these areas temporarily drove the rebels back into the more distant mountains."

"So we won't get shot out of the sky," observed Rip.

"That's the general idea. Now I'll leave the driving to you while I set up the Damonscope."

Bud put a hand on Tom's sleeve. "Mind if I tag along? You know I like the smell of new transistors in the morning!"

"Great."

The Damonscope was moved to a small compartment on the bottom deck of the Sky Queen. It was mounted frontside-down, its lens assembly inserted into a port on the floor, which had then been carefully sealed to prevent any pressure leakage. Next to the boxlike console was a monitor and recorder, which was tied in to the ship's satellite-based global positioning system.

"We'll know exactly where the real estate on the screen is located," Tom explained to Bud.

Bud tapped on the outside of the device. "Now comes the part I really like, where you tell me how the thing works!"

Tom smiled at his pal. "Okay. The radiation given off by radioactive materials like uranium comes in three kinds. So-called alpha rays are actually nucleons, helium nuclei set loose by the process of atomic decomposition. They're heavy, slow-moving particles and almost never get beyond the ore itself. Then there are the beta rays, which are just free electrons shooting out of the material at a fair percentage of the speed of light."

"In other words, fast."

"Yep. Because they're so fast and so small, they manage to get a little distance, especially if they make it out into the open air. Old-fashioned Geiger counters react to those particles—and you'll notice how uranium prospectors have to hold their instruments low to the ground. You can't really detect deep ore that way, much less work from a cruising plane."

"Got it."

"Finally you've got gamma rays, which are high-energy electromagnetic waves, a notch higher than x-rays on the spectrum. They have mucho penetrating power, and gamma sensors are often used nowadays. Unfortunately, even gammas get too diluted and fuzzy to give an accurate reading at a distance of thousands of feet, which is where we'll be."

Bud nodded his understanding. "Like looking through a fog. Okay then: big problem. So what did you come up with, Professor?"

"Well, high-energy electromagnetic radiation is sometimes called ionizing radiation, because it has the ability to knock electrons loose from atoms, turning the atoms into ions with a positive electrical charge. Now when light waves pass through electrical and magnetic fields, like those that surround ions, they become polarized—the waves march in step, so to speak, instead of their usual jumble."

"Which is what makes polarized sunglasses work."

"Right. So what the Damonscope does is receive and amplify light reflected through the air from the small section of the ground below that we're interested in. By analyzing the light for polarization effects, we can determine the likelihood of an underground gamma

source in that area."

Bud clapped Tom on the back. "You must be a genius, pal, to be able to make me think I understand how it works! So go to it, uranium bloodhound!"

When Rip signaled that the ship was in position for the first experimental pass, Tom activated the Damonscope. A view of the terrain below appeared on the screen in muddy-looking black and white tones. But immediately Tom was thrilled to see streaks of green, indicating radioactive emission.

"It works, Bud!" he cried.

As the flight progressed, the greenish patches became brighter and more numerous.

Finally Bud said, "Man, that mountain below must be made of solid uranium!"

"Not quite," replied Tom, his expression thoughtful, "but the readings do look mighty interesting."

Suddenly the intercom buzzed. "Tom, you'd better get up here fast!" insisted Rip Hulse.

"There's something going on back at Enterprises!"

Tom and Bud raced up to the command deck. "It's not a direct link to Shopton," Rip explained. "It's being relayed through the American embassy in Bogota, Colombia, then on to us by satellite."

A chill ran through Tom as he reached for his headset. Had something happened to his father? To his mother or sister?

"Are you there, Tom?"

"I'm here, Harlan."

"We're on an encrypted link, extended to you via a tight-beam transmission. We can speak freely."

Tom asked Harlan for his personal identification code, lest he prove to be an impersonator using voice-mimickry technology. When the security chief had provided the code, Tom said, "All right, tell me what's happened. Obviously something serious."

"Extremely serious," responded Ames. "And the only way to tell you is to say it straight out. The space missile has been stolen!"

"Stolen!" gasped the young inventor. "But how is that possible? It was in a secured laboratory!"

"Right, and we had it on camera at all hours of the day and night. Nevertheless, at 2:19 this morning I received a call from Bill Poulousa, who was on the monitor shift. As you know, he has nine small screens in front of him, switching constantly from one view to another. He followed protocol and noted the presence of the missile in its normal place at 2:14. On the next camera sweep at 2:18, it had disappeared completely—vanished!"

"The live monitoring is only intermittent, but the taping is continuous," Tom pointed out.

"What do the tapes show?"

"That's just it, Tom," Ames replied. "I've been over every second of those tapes a dozen times. The missile just sits there undisturbed until 2:15:51 AM, and then, without a flicker, it's just not there anymore! I've spent the day overseeing a search of the grounds, checking fingerprints, examining the radarscope records... and there's nothing to see."

Tom was silent, his brain churning. "Harlan, it's possible the projectile was destroyed, or

moved somehow, by the beings who sent it. But that doesn't ring true. They obviously intended for us to decipher their symbols and take some further step to establish communication. They would leave it in place until they knew we had finished the job."

"Then it's an earthly enemy. But we've had no sign at all of any unauthorized intrusion." There was a pause on both sides. Then Tom said, "Can you transmit to me a copy of last night's monitor tape over this link?"

"I'm sure of it," Ames responded. "I'll use databurst compression, which your computers there can interpret. I'll also send the radarscope output, and the printed log of comings and goings for yesterday and today."

"Thanks. By the way, why are you using the Bogota embassy instead of Cristobal?"

"To tell you the truth, I've begun to have some doubts about the motives of the Montaguayan government. Nothing specific. But I'd advise you not to trust anyone there too freely."

Tom signed off and proceeded to couple the radio input to the Flying Lab's onboard computer system. As he did this, he briefly outlined to the others what Ames had said. Hank Sterling whistled. "This is mighty serious stuff, Tom."

Tom shook his head. "Serious? No. I'd say cataclysmic. The phantom jet proved that there's some connection between our South American enemies and Central Europe, where there are many underground factions with no love for the U.S. and its 'hegemonistic ways'."

"Then just what are you saying, Tom?" asked Bud, wide-eyed.

"I'm saying that if we don't get the missile back before our adversaries unlock its secrets, it could mean the destruction of the human race on Earth!"

## CHAPTER 18

### X THE UNKNOWN

"What I'm saying is just common sense," Tom continued earnestly. "If an unstable terrorist group gets their hands on alien technology, they may not be willing to just issue threats—they'll be tempted to use what they've got, with consequences no one can predict."

The others looked at one another, aghast. "Is there anything we can do?" asked Arv Hanson, his face as pale as his blond hair.

"We've got to put all we've got into nabbing the thieves!" Bud declared heatedly. "We can call out the FBI, the CIA, the National Guard, the Marines—!"

"The first step is probably to inform that FBI agent, Hal Brenner. I've got his card in my wallet. We'll use the same radio-and-cryptophone setup Harlan used. Bud, you make the call; put Brenner on the intercom to my lab cubicle if he has questions that Harlan probably couldn't answer." Tom handed Bud the card. "No need to go into details about the missile. Just tell him it's part of a Swift project with national security implications."

"That'll get him interested fast," commented Rip Hulse.

"In the meantime I'm going to study what Ames is transmitting to me. Maybe I can figure out how they pulled off the robbery."

While waiting for Ames's transmission, Tom returned to the lower deck to continue the aerial prospecting project over the Verano region. Rip had the Sky Queen execute a complicated flight pattern over the Montaguayan Andes. Though the majority of the sorties yielded little, there were a few "strikes" showing up on the Damonscope that momentarily took Tom's mind off the crisis in Shopton.

If that's really uranium down there, the people of this country are going to be tremendously enriched, Tom thought. If the rebels already have a clue about this, it's no wonder they're fighting to hold on to the territory! But there were other instrument readings that left Tom intrigued, puzzled—and excited. What I'm seeing can't be true, he said to himself. And yet...

Tom periodically made a remote check of the Flying Lab's computer. Finally the databurst from Swift Enterprises had been received, and Tom was able to begin working with it in the electronics laboratory cubicle.

He minutely studied the copy of the security videotape. It was as Ames had said. At a certain instant, the tape running without interruption, the object suddenly blanked away into thin air. The plant radarscope tapes showed nothing unusual at that time, and there was no indication of an intruder.

"Okay, 'genius boy,' think!" he ordered himself. "This is just the 'unknown X' in the equation; you've solved plenty of those. When did the missile pull its disappearing act? Around 2:15 in the morning. So what goes on at Enterprises at that time?" He again scrutinized the radar output for that point in time. "Nothing! Of course we know our pals can defeat the system to keep a man from showing up on the scope, and the missile doesn't reflect radar anyway. But it's bulky and heavy, which means they must've used some sort of carrier vehicle. Which ought to ping on the scope, unless they've developed a more powerful radar-trapping unit."

Or unless...

What if the theft didn't happen at 2:15 after all? Tom thought. "Let's assume they did something to the camera, causing it to continue showing the missile even after it'd been taken. That's technically possible if you've got someone working on the inside. So the theft could have occurred any time after the last time someone eyeballed the missile directly—which was probably Dad, before he left for Washington."

Now Tom examined the radarscope tapes and admission schedule for the day preceding. Abruptly he leapt to his feet. "That's it!" he cried. "X!"

"Bud, put me through to Harlan Ames," Tom said over the intercom. "I think I've solved it."

"Here he is, Tom," said Bud Barclay after a few minutes.

Ames came on. "What do you have?"

"Lots," replied Tom. "First of all, I'm guessing that somewhere within a few yards of the camera—probably in the room overhead, concealed somehow—you'll find a photodiode-override transmitter. It would have a dish antenna focused directly on the camera's image emulator."

"Some kind of jamming device?"

"No, a masking device. It overrides the electronic pattern created inside the camera by the lens system and substitutes a new pattern—in this case, just the unchanging image of the missile in its place, held constant. I didn't think they'd been perfected to this point, but we're dealing with some top scientists, it seems. The thing probably runs on battery power, and uses a lot of electricity; at 2:15 it just went dead, and the real scene appeared again on the monitor."

"All right," said Ames. "So they switch on the masking gadget, and we can't see them. Then what?"

"Defeating the lab's other security systems, including the electronic locks, wouldn't give them much trouble—not these boys. They get in the room, pushing some kind of cart or handtruck, maybe just a framework with wheels that can be folded up. They use it as a lever to pick up the missile, and then they roll it out the door. And I know when they did it, too!"

"When?"

"Late yesterday evening, a little before midnight."

"In other words, a little over two hours before the time we thought the theft took place." Tom could tell that the security chief was beginning to fit the pieces together. "We know the missile isn't hidden in the building, because we've searched it. So I'll say the thief exits the building out onto the grounds, in the open air. Why don't the cameras pick him up? They're mounted high up on poles—one of those masking devices couldn't get within range."

"The cameras did pick him up, Harlan," Tom exclaimed. "But you didn't know what you were seeing! Twice a week, around midnight, the tank vehicle from Northeast Enviro-Management enters the plant to drain off the toxic waste from our chem labs. They've done it for years. Their drivers are bonded, and we trust the company completely."

"I know where you're going with this, Tom, but it doesn't work," interjected Ames. "The security guard at the gate is one of my most reliable men, and he knows the NEM driver by sight. He swore it was the usual guy."

"Sure—coming in!" Tom retorted. "But I'll bet the driver barely rated a glance as he left. My guess is you'll find the legitimate driver tied up somewhere near the chem building, suffering from memory loss. And surprise!—the radar-scope tape shows that the truck paused for about two minutes right next to the door of the lab where the missile was being studied!"

"Which would have blocked our line of sight pretty thoroughly," muttered Ames, chagrined. "He drove off with the missile somewhere in the truck, maybe even in the waste tank, and we didn't have a clue."

Promising to inform the authorities and to contact the NEM company for information, Ames signed off. Tom secured the tape copies he had made and prepared to return to the Damonscope.

He was on the verge of leaving the compartment when he absent-mindedly glanced out the window. To his surprise, he saw only open sky and distant clouds, not the mountain peaks they had been threading their way through for hours. Stepping closer, he looked

down through the multi-layer glass. The Sky Queen was maintaining a straight and steady course over the green velvet jungle of the western Amazon basin—the easternmost quarter of the narrow snake-shaped country that was Montaguaya, an area claimed in its entirety by the Verano rebels.

We're not cleared to be here, Tom thought. If they have surface-to-air missile capability, we're in trouble!

He reached for the intercom button on the bulkhead, then paused. It would be more efficient to go up to the cockpit and speak with the others directly, as he wanted to keep them abreast of the complicated situation back home.

Trotting forward to the command compartment, he slid open the dual entry panels and stepped inside. Rip and Bud were still at the controls. "Say," said Tom, "what's up with this—" But he stopped, overcome with shock and dread. The two pilots were shifting limply with the slight motions of the ship, held in place by their safety harnesses.

Unconscious—or worse!

The young inventor raced to the side of his friends to check their pulses. As he did so, a fearsome new sight caught his eye.

Arv Hanson and Hank Sterling were both lying crumpled on the deck!

As he stood looking, momentarily frozen in place, he heard the clear sound of footfalls on the deck behind him. A half-thought shot through his brain. We five are the only people aboard!

"Slowly, young man, slowly." The voice was deep and unfamiliar.

Tom turned about to confront the unknown intruder.

The man was tall and slender, but unexpectedly muscular, his skin burnt dark by the sun, his eyes gray. His face was long and dour. Tom thought he looked like he had never smiled in his entire life. He was dressed in a loose tee-shirt and khaki pants. Tom judged the gun in his hand to be of a foreign make, possibly military issue. It was trained on Tom rather casually—for a gun.

"I wish very much to get along well with you, Tom Swift," the man said. "After all, we have the same name, do we not? Tomas Zavoga, at your service."

Half-raising his hands, Tom nodded toward Rip and Bud. "What did you do to them?" he demanded.

"Ah, such concern for your employees! It is very noble."

"They are my friends."

"Then I think it is not so noble, but still most natural." The man raised his eyebrows in a sort of facial shrug. "Not to worry. The spray is harmless and will wear off. Perhaps a little loss of memory. But what do they have so important to remember?" With his free hand, Zavoga took a small spray can from his voluminous pants pocket. "This stuff, it only works in concentrated form—otherwise I should have to wear a mask. Do you smell it? Perhaps we shall open a window, eh?"

Tom's eyes bored into his adversary. "We are here representing the United States and Hemispak. Our mission is scientific. By attacking us—"

"No, no!" protested Zavoga mockingly. "What attack? I am a guest aboard your

beautiful ship of the clouds. Admittedly, I found it wise to defend myself... preemptively. But I had those men over there lie down on the floor before the spraying, lest they fall and bruise themselves. The others, of course, were comfortably seated. And they still are!"

"Who are you?"

"I have said my name and that is not enough? I am hurt." He sighed. "But perhaps you should turn your Damonscope in the direction of the newspapers. Do you not know that I am the Lieutenant Commander of the Militia for the Rights of the Puyachay? Which is to say, the Veranistas. I am sometimes called 'the capitan'."

Tom nodded warily. "I've heard of you. I suppose you intend to steal the Flying Lab and hold us captive."

Zavoga motioned toward the deck with his gun barrel. "Tell you what, let us both become more comfortable. Sit down."

Tom sat and so did Zavoga, laying down his gun, though it remained within fingertip reach. "Better," he said. "Now then, what do you think you know of me and my compadres, eh?"

"Your group has menaced me and my family," Tom declared. "You planted a bomb aboard this aircraft. You kidnapped the Roberts expedition. You had me kidnapped—I was to be delivered to you."

Zavoga raised his eyebrows and nodded thoughtfully. "It looks bad for me, eh?" His gray eyes locked with Tom's in a freezing stare. "And have you asked yourself, my genius, why we would do such things, why we Veranistas would wish to draw the mighty superpower of the North into our affairs here? And on the side against us?"

"I'll tell you why," said Tom. "Because of the uranium. Because you knew your government would turn to us as scientists, to find where you are mining it for your illegal traffic."

"I see, I see." He removed something from his pocket—several photographs. Zavoga slid the bunch of them across the deck to Tom, where they fanned out like a hand of playing cards. "To put you in the mood to hear what I have to tell you. You talk of kidnappings. I deny that these incidents you mention were—what do you say? Orchestrated by us, by the rebels. No, not by us. And yet they did happen, Si? And another one besides."

Tom stared at Zavoga. "What do you mean? Another what?"

"But of course, you don't know yet." Zavoga showed his yellowed teeth in a chilling, humorless grin. "I refer to the kidnapping of your father."

## CHAPTER 19

### THE DESPERATE DIVE

TOM'S MUSCLES KNOTTED and he would have jumped to his feet had Zavoga not given him a warning look, accompanied by a tap on his gun.

"You're lying!"

"It is always a possibility," the man replied calmly. "Yet I say I am not. But why

speculate, when you have only to look?"

Tom rubbed his forehead. "Why should I believe you at all?"

Zavoga shrugged. "Well, I tell you, I don't know. Of course, these could be fakes," he said sarcastically. "I will let you judge. My friends in Alta Bapcho took them by telephoto lens."

The photos showed a number of men milling about in a walled-in patio. Some of the men wore the uniform of the Army of Montaguaya and carried rifles. The others, dirty and unshaven, wore civilian clothing and were handcuffed together. Tom flipped through the photos quickly. In one photo he saw a man in a coat and tie, who seemed to be giving instructions. His face was turned away. In another—

"My father!" Tom cried. "Handcuffed!"

"Taken yesterday morning," Zavoga remarked. "And count two down, do you recognize that man?"

Tom nodded. "I've seen his picture. It's Mr. Roberts's son!"

"And other members of his party. Their helicopter was forced down by the National Air Force."

Tom looked up sharply. "The National Air Force. So your story is that a faction in the Montaguayan military has muscled in on your uranium racket, is that it?"

Zavoga gave a bark of laughter. "A faction, amigo? Tell me, do they teach anything in your schools? Do they print anything in your newspapers? Look carefully at the next picture, won't you? I think perhaps you will see an old friend."

In the next photograph the man in the suit had turned partway toward the camera and was caught in a shaft of sunlight, his face illuminated. It was the face of Deputy Minister Rigoledo!

Tom slammed the photos down. "All right. You have my attention, Señor. What is this all about?"

"It is about treachery, young Tomas," the man responded gravely. "Treachery, and the human vice of greed. How shall I begin?"

"You might tell me how you came to be aboard this ship."

"Not at all difficult," said Zavoga. "Not when there are, shall we say, sympathizers within the Army base where your Sky Queen was berthed for a day. To breach your security devices was easy enough—after all, we have monitored the methods of our enemies, who have mastered such things at your Swift Enterprises. That parachuting fool Luis Duran, for one, who was trapped on the ship while spying and had to signal his confederates to snatch him in the air—a signal we received at our encampment."

"Where do you get the technology for all this?"

"Why, Señor, we steal it!" He looked apologetic. "But it is not so bad, you see, for we steal it from those who have already stolen it—stolen it from you, in fact."

"The spy at Swift Enterprises?"

"Just so. He does not know that he is 'bugged.' I am sure you wonder how this man, whose name is Vernon Doss, came to work for you. First, most of his background was falsified. But what is more important was a recommendation from someone powerful

and trusted, someone high up—in your own Department of State, you see."

Tom grimaced. "Harold Tennyson!"

"The good Dr. Tennyson, trusted diplomat, man of world peace. Before the shredding of the Iron Curtain, he was well known for his missions to Central and Eastern Europe. He utilized his many contacts there to become a sort of entrepreneur. His product line was radioactive ore, mostly uranium from my lovely Montaguaya. The form of payment was not always money. One country has decided to pay its bill in somewhat-outmoded fighter jets, as you have seen. There is also payment in human-kind, so to speak—a short-term lease upon the learned services of such men as Dr. Leeskol. Do you see?"

"Yes," replied Tom. "And where does Rigoledo come in?"

"We would run out of fuel long before I could give you the true history of my country," Zavoga declared. "Democracy was undermined almost as soon as it began, and the government is riddled with corrupt, self-serving men and women. Your Deputy Minister Rigoledo is in charge of the international disinformation campaign aimed at the Puyachay and the Veranistas. They will not give Verano its independence, for they know of the uranium locked in the mountains—trillions of altaesitos!"

Tom shook his head in chagrined weariness. "It makes sense. We have some dangerous incidents in Shopton, and Rigoledo shows up to blame it all on the Verano rebels, with Tennyson acting as his cheering section."

"They hope to get the United States involved, you see," continued Zavoga. "And so they have a fine no-lose plan. You come here with your inventions, Tom Swift, unwittingly endangering us. Perhaps we rebels will hesitate to defend ourselves. They win, and get from you the key locations of the ore deposits."

"And if you rebels do take action against us, by shooting down the Sky Queen or something else, they still win—because it draws in the United States on the side of the government."

Zavoga showed his teeth again. "Ah, a quick mind, Tomas!"

Tom thought back to the dinner at the University. "Is Fernans y Zuniga behind it all?"

The other man smirked. "Pfaa, El Presidente! Oh, once Fernans was a good man, I think. Perhaps he still is. But good men wear out, as do all of us. His opinions are no longer heard. And so they are no longer uttered." Zavoga straightened up. "No, Montaguaya is run behind the curtains by The Cabal, a group of military men, wealthy industrialists, drug-lords, and the representatives of a few of the great old families. They run everything—except Verano!"

Now Tom also straightened up, looking Zavoga in the eye. "So you Veranistas are just good, idealistic, democratic earth-lovers. Maybe you're in this with Rigoledo's group."

Zavoga looked disinterested, yet Tom could sense a furious anger flaring within. "If you are so cynical, I can say nothing to you. But listen, who do you think released the bolt on the cellar door that night in the farmhouse? I myself! The fools used my nickname in front of you as part of their charade, but you should have seen their faces when that name stood before them in the flesh! And why were we there, eh? To free you, young Tomas. In the process, one of my men died. But do not feel bad, we killed one of theirs,

and even brought a few back as prisoners."

"You could have introduced yourself that night," commented Tom wryly.

"With your FBI on their way? I think not."

Tom took a deep breath. "I want to stand up now."

Zavoga nodded and stood up as well, holding the gun loosely. "Now you know what is to be known."

"Not hardly!" retorted Tom. "What about my father and the other kidnapped men? What about the Flying Lab?"

"The enemy holds Mr. Swift and the others. How shall I know what they intend?"

Zavoga shook his head. "Perhaps it is a ransom plot. Perhaps it is another move to discredit the rebels. Perhaps they think to hold it over our heads in some way, to gain a concession. As for your airplane—but let us step over to the controls, por favor."

They approached the control panel. "If you wish to check the pulse of your friends, you may do so. Then lower Mr. Hulse to the floor, if you please. You will have to take his seat."

Tom carefully took Rip's and Bud's pulse-rate and listened to their breathing as best he could. Everything was normal, even relaxed—they might have been in a deep sleep.

"How much longer till they wake up?"

"Not so very long," responded the capitan. "And then, for a time, it seems the victim is most suggestible. That is how Pedro Canova overcame your Mr. Roberts, the night guard. Roberts does not remember that he was interviewed before he was sent on his way. And we had a copy of their report within two days."

Tom dragged Bud from the co-pilot's chair, gently placing him next to Hank Sterling. Then he took Bud's place, strapping himself in as Zavoga leaned over his shoulder, nudging him occasionally with the barrel of the gun. "Now what?" Tom asked grimly.

"I am something of a pilot, Tomas, and I have been able to study the blueprints of your Sky Queen." There was pride in Zavoga's tone. "I know there is an automatic guidance system. With regrettable insistence—his attitude was rather uncooperative, I am sorry to say—I compelled Hulse to set a general course, very slow, in the direction of our base camp on the eastern edge of Verano, at the triple border between Montaguaya, Brazil, and Colombia. Now it is time for you to take over the controls. We have prepared a landing field for you."

"And what is your purpose? To ransom us? The ship?"

"Not at all," he replied suavely. "You will continue your project, your sky prospecting. You have merely changed employers. We do not have the ability to work the deposits to generate ore for sale, but if we know the location of the uranium we can keep the government forces, Los Cabalistas, at bay."

"And my father and the others?"

"We will work something out with them."

"Rigoledo said something similar," Tom fumed. "I see no reason to cooperate with you. You're all killers as far as I'm concerned! And if you shoot me, Zavoga, you have no way of being sure that the fuel won't run dry before Rip or Bud are in shape again to

pilot the plane down."

Zavoga did not seem at all put out by Tom's anger. "You are very logical," he remarked. "Over there—the keypad for a telephone? Perhaps we can connect to the poor primitive cellphone service of Montaguaya, Si?"

Tom saw no reason to deny it. "Yes, we have a powerful antenna mounted in the belly of the ship."

"Very good. You will please dial this number, then. I would do it myself, but it is hard to hit the right keys with the barrel of a gun." Tom punched in the number Zavoga gave him, putting the phone on speaker mode. It was answered on the third ring by an unfamiliar voice. The man and Zavoga spoke rapidly in Spanish and then, after a silent pause, a new voice came on the line.

"Boss? Brand my buffalo biscuits, that you?"

"Chow! Where are you? What happened?"

"Aw, one dang thing after another!" he said disgustedly. "After you left I hardly had time t'turn around afore they 'as pullin' guns on me an' hustlin' me into a big car."

"Did they hurt you, Chow?" Tom asked in frantic concern.

"Waal, no, cain't say they did," Chow replied reflectively. "Fact is, Tom, they got me all set up in the penthouse of another one o' them luxury hotels. They got the door bolted, of course, and Jorge and Juan are allus here with their guns t'keep an eye on me. But lately we been playin' cards. Bathroom's about as big as a bedroom, bedroom's about as big as a whole house, an' that satellite TV o' theirs gets two-hundred—"

"Bye-bye!" chimed Zavoga, breaking the connection. "And now you know."

Tom eyed him suspiciously, his mind racing. "I thought you boys didn't play the kidnapping game."

"Not with you!" Zavoga responded. "Not until this morning. And we have raised Mr. Winkler up to a better station in life, have we not? You must accept that we will do what is necessary for our cause. The other side has your father, so we have now your cook. You cannot say we overreach!"

Tom sighed with resignation and reached for the controls to disable the automatic pilot.

"All right. Give me the coordinates." He pretended to pay close attention as Zavoga read off a string of numbers. In fact, the numbers he entered into the guidance system had nothing to do with his adversary's chosen destination.

From that moment everything happened with frantic speed. Suddenly the Sky Queen shud-dered and began to rock from side to side, first in gentle motions, then pitching violently like a ship in a storm.

"What is this?" cried Zavoga. "What did you do?"

"Nothing! But—no!" Tom pointed toward a section of the readout panel. "That red light there—you see?"

"What does it mean?"

"It means the solar units are depleted! Rip must have switched them off while setting the automatic pilot!" Tom feigned terror. Hope I'm a better actor than Dad, he thought.

Struggling to maintain his balance, Zavoga aimed his gun at Tom's head. "Then you will

switch them back on."

"You don't understand," was Tom's response. "It will take an hour to build up the charge again, and by that time—!"

Abruptly the Flying Lab seemed to quiet itself. "That's better," said Tom's captor.

"No it isn't," replied the young inventor hollowly. "It means the aeolivanes have cut out. We're going into a power dive!"

The deck was noticeably tilting forward, and the electronic airspeed indicator began to advance.

"Somehow I don't believe you," said Zavoga with icy calm. "You have done something to the controls."

Tom said nothing.

Zavoga aimed the gun again, and this time his finger visibly tightened on the trigger.

"You are wasting my time. Correct the course of the plane."

On impulse Tom flashed him a defiant grin. "I'm sick of being told what to do, Señor. And I'm sick of trying to figure the good guys from the bad. You don't like the course, you correct it."

"You will die!"

Tom raised his eyebrows. "Did you think you were the only one aboard who could be brave, amigo?"

"Ah. I see." Zavoga lowered the gun and moved closer to the viewport, gazing downward. "The ground is getting close." He looked at Tom for a moment as if calculating, then turned and strode purposefully across the tilting deck to the place where Tom had deposited the unconscious Bud.

He lifted his gun. "First, your special comrade. Then, if you are still unmoved, perhaps Mr. Sterling. You know what I think? I think only I will be left to die when this ship reaches the ground."

"No!" shouted Tom. "You win." He reached for the controls.

Zavoga looked at him, waiting.

As Tom connected with the wheel, he had a brief flash of a day months before when he had said to Sandy: A barrel roll is just a simple turn. Except that you keep the ship turning until it's upside down and back again.

But this time the ship in question was a giant.

Could a giant manage a barrel roll?

"Guess I'm about to find out!" Tom muttered.

## CHAPTER 20

### BOLTS OF VENGEANCE!

DESPITE THE multiple layers of metal and glass that shielded the interior of the Sky Queen from the outside air, the screech of an uncontrolled dive was beginning to penetrate the cabin.

Hands darting like heat lightning, Tom powered-up the forward engines for maximum control, shifted power to the aeolivanes, and programmed the jet lifters for a short, timed

burst. Then, trusting the massive gyrostabilizers to keep the ship from spiralling, he pulled back on the wheel and dragged the nose to starboard as sharply as he dared—and then some!

The forces released instantly drained the blood from Tom's head and flattened him to his seat. His muscles strained to keep his hands on the wheel. Somewhere behind him Zavoga gave a yelp, and Tom could imagine him flying against a bulkhead while his gun clattered across the deck.

Clouds whirled madly across the viewport; then the horizon spun across like a compass needle. Must be... at the top... upside down... thought Tom, fighting the gray haze of semiconsciousness. And then they were on the upside of the arc again, weight and direction reversed. With his peripheral vision Tom saw his unconscious friends sliding and tumbling across the polished deck.

After a time that seemed at once amazingly long and unexpectedly brief, Tom realized that the ship was leveling out again. The Sky Queen had survived the barrel roll!

Immediately he forced the stratoship to make a violent swerve to starboard. He was rewarded by the sight of Zavoga spinning like a futbol into the floor-level viewport pane. There was no sign of the gun.

Kicking the ship into automatic mode, Tom launched himself toward the prone Veranista, who was struggling to right himself. Rather than confront the older man's powerful muscles, Tom grabbed him by the back of his belt and swung him headfirst against the unbreakable down-facing viewport like a sack of potatoes. Zavoga grunted and slid down the curving pane, leaving a streak of red behind. He was out.

Tom bound the man's hands behind him with his own belt, and then similarly bound his ankles together, using Bud's belt. He made sure the others were still breathing and unbruised—Hanson and Sterling were beginning to stir—and then attended to Zavoga's head wound.

Zavoga's eyelids fluttered. Glancing at Tom, he groaned. "I already had enough scars, amigo!" he murmured. Tom didn't take the time to answer, but instead activated the encrypted communications link with Swift Enterprises. Soon he was explaining the situation to Harlan Ames.

"Unbelievable!" exclaimed the security chief. "And yet—I had an intuition that something wasn't right with Rigoledo."

"How about this man Doss?"

"We'll pick him up immediately. And I'll contact Agent Brenner about Tennyson in the State Department."

As Hanson and Sterling came fully awake, and Bud and Rip began to show signs of life, Tom formulated a daring plan.

By nightfall, the Sky Queen was roaring across the Montaguayan skies in the direction of the village of Alta Bapcho.

"Kid, your plan sounds a little crazy to me, and I'm the world's biggest collector of crazy plans," Rip Hulse remarked. "Wouldn't it be better to let the two governments work things out?"

"I've seen how governments work things out," Tom said with determination. "I'd just as soon they did it after Dad and the others have been freed!"

Not long afterwards Bud announced that the Flying Lab was now hovering at 55,000 feet over the village, which was itself located high on the side of a mountain. "Think they can see us?" asked Bud.

"No," Tom responded, "too much haze in the air. We'll have to make ourselves known!" His eyes were sparkling.

A little later Tom freed Tomas Zavoga's hands, and placed in them a printed sheet of paper. Written in Spanish, which Rip understood fluently but could only speak unconvincingly, the sheet read:

"ATTENTION! ATTENTION, ALL BELOW IN ALTA BAPCHO! YOU ARE TO LEAVE YOUR HOMES IMMEDIATELY AND ASSEMBLE IN THE CITY SQUARE. I AM ROBUR THE CONQUEROR, SPEAKING TO YOU FROM MY WARSHIP OF THE SKIES. YOUR GOVERNMENT IN CRISTOBAL HAS FALLEN TO MY FORCES. COME OUT TO RECEIVE MY INSTRUCTIONS. IF THERE IS RESISTANCE, I WILL DESTROY YOUR VILLAGE WITH MY BOLTS OF VENGEANCE!"

Zavoga looked up at Tom. "Who is this 'Robur'?"

"A character in a Jules Verne novel about an airship. It seemed appropriate."

"If they do not laugh at 'bolts of vengeance,' perhaps they will be intimidated," he said.

"Do you show this to me for my literary opinion?"

"I want you to read it aloud, over a loudspeaker," Tom answered. "You must read it just as written. And you must make it sound believable."

"And why shall I do this for you?"

"Because these men are your enemies too," said Tom. "And because I ask you to."

Zavoga nodded. "I am willing. Si."

Bud called over to Tom, "How low shall we go before you start the announcement?"

"We won't descend at all," he replied. "The kind of loudspeaker we'll be using will work just fine over this distance. It's more dramatic if they can't see the ship right away. I got the idea from you, Bud!"

"Right," Bud laughed. "The balloon Mar-tian!"

The intercom buzzed. "The phonon-antennas are in place, Tom," came the voice of Arv Hanson. "Just raise the hangar bay door as soon as I'm out of here."

"Good job!" said Tom. Clicking off the intercom, he turned to Bud and the others. "I'll be in the compartment below where the Damonscope is set up. Its magnification and night-vision features will let me see what's going on below. Give me three minutes, and then, Señor Capitan, the stage is yours!"

In the compartment Tom activated and adjusted the Damonscope. An image of the village below swam into view on the monitor. Tom was able to zoom in tightly on the central square. He judged that all the official buildings in the tiny village fronted the square, with the residences one street back. One building in particular caught his interest: a stockade-like structure with a roofless walled patio.

"I'd bet anything that's the building where Dad and the rest are being held!" he murmured excitedly to himself.

Just then the entire ship began to vibrate in rhythm to the words of Tomas Zavoga, who turned out to have a natural flair for the dramatic. Tom knew the paired subsonic phonowave projectors would transmit concentrated sound pulses all the way to the ground with little loss of volume and quality.

After reading the message slowly, Zavoga began to repeat it. Tom was thrilled to see, on the Damonscope viewer, the effect of the message on the villagers below. They were pouring into the square in various states of undress, waving their arms and straining to glimpse the menace above them.

After Zavoga had repeated the message a third time, Tom broke in on the intercom. "All right, go on to the next page." Zavoga complied.

**"PEOPLE OF ALTA BAPCHO, NO LONGER SHALL YOUR GOVERNMENT BE FILLED WITH CRIMINALS AND THIEVES. THE FORMER OFFICIALS AND MEMBERS OF THE ARMY AND POLICE HAVE NO MORE POWER OVER YOU. I, ROBUR, AM IN CHARGE. THERE IS TO BE NO RESISTANCE. NO WEAPON IS TO BE FIRED. OBSERVE MY POWER!"**

Tom threw a switch that Hank Sterling had rigged up for him. Instantly the reserve capacitor bank of the solar units discharged a massive electrical pulse through a hastily-constructed electrode protruding from the open hangar bay. Though the modulated pulse actually carried little energy and posed no danger, Tom knew it would produce a brilliant light show.

He was not disappointed. Exactly as calculated, the bolt struck the tip of the radio antenna at the top of a building next to the square. Its inner plasma field was to an extent self-sustaining. Unlike a bolt of lightning, it persisted for almost ten seconds in the form of a weirdly writhing electrical "flame" coiling about the antenna before it finally dissipated with an explosive Crack!. It not only looked as a "bolt of vengeance" ought to look, but it also knocked out the radio-transmission system and village TV and phone relays. There would be no news into, or out of, Alta Bapcho for at least a day.

Tom could tell that the citizens, awestruck at first, were now verging on panic. He gave Zavoga the go-ahead to continue.

**"AMONG YOU ARE THE EVIL MEN COMMANDED BY COLONEL JUAN SANTOREZ. THEY HAVE MADE CAPTIVES OF INNOCENT PEOPLE, AND I AM ANGERED AT THIS DISGRACE TO THE HONOR OF MONTAGUAYA.. JUAN SANTOREZ, CARLOS VIEJA, ANARBOL REMEDIOS, ESTEBEN MATTA, COME FORWARD! DO THIS WITH DIGNITY AND YOU WILL NOT BE HARMED."**

"I am thoroughly enjoying my role," intercommed Zavoga. "I trust it is having the desired effect?"

"Definitely," said Tom. "And now, the performance needs a spotlight."

The Swift searchlight had been lowered into its sealed dome beneath the ship. Aiming it in coordination with the settings on the Damonscope, Tom activated the wonderful illuminator. A column of diamondlike white light fell upon the village square in front of

the stockade building, creating a glittering disk no more than ten feet wide.

One by one, men in military uniforms straggled into the light, tossing aside their rifles. Their hands were raised. Tom assumed that these were the men indicated, whose names had been provided by Capitan Zavoga.

"YOU DO WELL. REMAIN AT ATTENTION! DO NOT MOVE! NOW, ALL YOUR CAPTIVES, THE FOREIGNERS YOU HAVE BEEN HOLDING, ARE TO BE RELEASED UNHARMED. LET NO ONE BE OVERLOOKED! THEY ARE TO STAND TOGETHER BY THEMSELVES AT THE SIDE OF THE SQUARE. I, ROBUR THE CONQUEROR, AM COMING DOWN FROM THE SKY TO TAKE THEM!"

After a minute Tom was overjoyed to see a dozen men, some of them dirty and bearded, being herded into the square at a trot by the remaining soldiers. One of them was Damon Swift!

"Down we go!" he chortled into the intercom. Even from the lower deck, he imagined he could hear the cheers echoing from above!

Returning to the command deck, Tom supervised the descent of the Flying Lab by means of its jet lifters. He also slowly redirected the searchlight beam. The military men moved along with it, showing no inclination to defy "Robur" by leaving the spotlight.

"Getting close now, Tom," Bud called out.

"Altitude?"

"Thirteen hundred," answered Rip Hulse. "Won't the heat from the lifters barbecue pretty near everyone below?"

"Not if Señor Zavoga reminds everyone to stand well back," said Tom. "And repeat it in English, too."

A half-minute later Bud announced that the Sky Queen was now hovering one hundred feet above the village square. "Everyone's moved to the side," he added. "Looks like they're behaving themselves."

Although his ankles were still tied, Zavoga rose to his feet. "Do not trust Santorez and his men! Though for the moment they are unsure, soon enough they will decide to reach for their guns."

Tom nodded—he had arrived at the same conclusion. He had Rip slowly turn the stratoship so that the main boarding hatch would be next to the liberated prisoners, and the ship itself would stand between the prisoners and the mass of onlookers.

"Take her down, Rip," Tom directed. In a moment they all heard the thump of the extended landing gear contacting the bricks below.

Now time was of the essence. Tom threw open the wide hatchway and, standing in the light of the streetlamps of Alta Bapcho, motioned for the prisoners to run forward to the boarding ladder.

Suddenly Tom heard the alarmed voice of Bud Barclay over the open intercom speaker.

"Tom! Hurry! They're grabbing their rifles!" Prodded by their leader, the soldiers had decided to risk a confrontation with their mysterious conqueror!

"Run!" Tom cried. But he saw that several of the prisoners were weak and ill, and some

could only limp along with assistance.

A rifle crack sounded, followed by a volley. Chips of cobblestone flew up from below. One slashed across Tom's cheek, drawing blood.

Could Tom and the captives get aboard the Flying Lab before being mowed down by their enemies?

As if in response to his thought, the Sky Queen's jet lifters gave forth a full-throated roar. The whole craft shuddered, and Tom heard yells of panic and pain from the space beneath the hull. The shooting ceased.

Rip's giving 'em a hotfoot with the jet lifters! thought the young inventor with relief. A short, weak burst would not be likely to harm anyone, but would be more than slightly intimidating.

The freed prisoners now made it up the ladder, the more able-bodied helping those who were faltering. Damon Swift was last of all. Passing Tom he said nothing audible, but gave his son a look of pride and gratitude.

Slamming the hatch behind him, Tom yelled. "Hit it!" The Flying Lab roared toward the upper air like a skyrocket, smoothly shifting to horizontal flight after clearing the tops of the mountains.

The former captives had been assembled in the lounge on the upper deck, where there were comfortable chairs and sofas. Sterling and Hanson began to examine them and provide first aid, while Tom drew his father to a corner of the lounge. They exchanged their tales in brief, rapid bursts.

Mr. Swift and three representatives of the Department of State had been flown directly to Cristobal via high-speed jet. But the entire diplomatic mission, which purportedly involved discussing grades of uranium ore with the Montaguayan government and the Verano rebels, proved to be a hoax. The four had been transferred at gunpoint to a helicopter, which had taken them to Alta Bapcho and their patioed prison.

"We weren't poorly treated," Mr. Swift declared. "The ones in bad shape are all from the Roberts expedition, which was shot down by missile. They've been here for weeks now. They told me of a man from the government who came now and then, but no one mentioned his name. I never dreamed it was Rigoledo!"

Mr. Swift was shocked and dismayed to learn of the theft of the space projectile just as he and Tom were so close to cracking the mathematical code.

"Which reminds me, I ought to radio Harlan and let him know the status of things here in Montaguaya," said Tom. First, though, he introduced himself to Barry Roberts, the geologist son of the Swift Enterprises employee.

"There were times when I gave up hope," said Roberts, his voice husky. "I hate to think what my wife and parents went through!"

"You can call them from the cockpit down below," Tom offered. "We have a very good long distance plan, Barry—we'll send you the bill after we get back!" he added jokingly. After setting course for Bogota, where the former prisoners were to be transferred to a hospital for treatment prior to their return home, Tom raised Harlan Ames on the communications system and briefed him on the rescue of his father and the others. "And

how about the gang stateside?" Tom inquired. "Any sign of that guy Doss?"

"Some amazing developments have occurred within the last hour, Tom," Ames replied.

"For one thing, Vernon Doss and two associates turned themselves in to the State Police!"

Tom was astounded. "They must have got word from Montaguaya that the plan was falling apart."

"No," Ames said. "It was because—well, you might say the space missile is no longer missing!"

"What do you mean?"

"It was discovered sitting neat as you please in the crater where it came down the first time. Just sitting there! The Enterprises employees who found it assumed it was just something we were testing, so the big secret is still safe. The arresting officers told me Doss has been babbling about how the object took off on its own without warning—and took off most of the roof of his hideout at the same time! The gang was so frightened by the experience they decided they needed official protection."

Tom shook his head wonderingly. "All this time I've been assuming the projectile was just some inert device designed to carry those symbols to Earth. But maybe our space friends are actually using it to monitor us."

"Yes," agreed the Security Chief, "or maybe it has some kind of electronic super-brain aboard that takes care of it automatically. And that's not all that's happened. Brenner just called to tell me Dr. Tennyson is in custody. He was arrested at the Baltimore airport trying to flee the country under an alias."

"What about that scientist-for-rent, Dr. Leeskol?"

"Not a trace. But we do know a little more about his background. He's worked with a number of militant and terrorist factions in the former iron curtain countries for at least ten years. His current employer—and the source of that jet—is thought to be the Democratic Workers Republic of Kranjovia! Of course they deny everything."

Tom chuckled. "I'll bet!" But suddenly he turned serious. "Harlan, I don't know who we can trust in Cristobal, but we have to arrange to free Chow."

"That won't be as difficult now as it might have been an hour ago," responded Ames. "News sources are reporting that, in effect, half the Montaguayan government has placed the other half under arrest! President Fernans just addressed the nation on TV, saying that a dastardly plot has been uncovered, blah blah blah. Deputy Minister Rigoledo is under house arrest, as are several prominent citizens—members of that so-called Cabal, I'd wager. And you'll be interested in this. The President has pledged to begin negotiations with the Verano rebels without preconditions, under the auspices of the United Nations!"

"That's fantastic news, Harlan," was Tom's excited response. They spoke a few more minutes, and then Tom turned the microphone over to his father.

Tomas Zavoga, ankles still bound, had been sitting within earshot of the speaker. "So what do you think of this?" Tom asked him.

The rebel looked up at Tom with his usual somber, hangdog expression. "What do I

think, young Tomas? I think revolutions come and go in Montaguaya. I think factions break with factions, friends turn against friends, and to put much trust in our feeble Presidente is to be an idiote!"

"That may be true," said the young inventor thoughtfully. "Yet it is also true that more will be at stake now than ever before."

"And why is that?"

Tom hesitated, then decided to reveal what he knew. "We have barely begun using my new device to detect radioactive ore, but already there have been some incredible results. There is uranium, yes, though on the whole not as much as you might have expected. But the readings show something else that science cannot explain—higher elements that cannot exist in nature, elements that we have only brought into existence for billionths of a second in particle accelerators! The next revolution in Verano and Montaguaya may be a scientific one!"

"I see, I see." Zavoga's eyes took on a distant look. "Valuable new elements, scientific mysteries—something to bargain with! Perhaps we shall prevail after all. That is, with firm and clever leadership."

Tom knew what the Veranista was thinking, but said nothing.

"I wonder," said Zavoga, "if I might have the privilege you Norte-Americanos give to those you arrest—that is to say, one phone call?"

Cautiously agreeing, Tom frisked his captive and then cut loose his ankles, asking Bud and Rip to help him keep an eye on the man. "And listen to what he says on the phone," Tom whispered to Rip.

Zavoga punched in the numbers on the keypad. As he did so, he spoke to Tom. "And Tomas, one question..."

"What?"

"The red light on the control panel—not depleted power?"

"No."

"What, then?"

With a mischievous smile, Tom leaned close and answered softly. "It means the control panel clock is on Daylight Savings Time."

Zavoga nodded and, to Tom's surprise, gave an ironic wink. Then he spoke rapidly in Spanish into the phone. He evidently had to repeat part of his message in a commanding tone.

"What's he saying?" Tom quietly asked Rip Hulse.

"He's talking to someone named Jorge. He told him to take Mr. Winkler back to the Palacio del Colon, check him into the best suite in the hotel, and tell him to wait there for you!"

Tom shot a glance at Zavoga, who was looking at him with raised eyebrows. "In our country," said Zavoga, "when one does a courtesy for another, it is incumbent on the other to do something in return. I unlocked the trap door, you overthrew the government. Very good. Now, I release your friend. And you?"

Tom reached out to take the receiver, wishing to speak to Chow. As Zavoga handed it to

him, Tom said, "We're not policemen, and the government that hired us no longer exists anyway. At the hospital, I suppose anyone we bring in could just check himself out and head—elsewhere."

Zavoga nodded with great dignity. "Gracias, Tomas, mi amigo. Oh, by the way, just a small matter ..." He reached deep within his pants pocket and brought forth—his gun! "Do not be ashamed, it takes years to learn to frisk properly."

He handed the gun, muzzle down, to Rip Hulse.

Tom repeated "Chow Winkler, Chow Winkler" on the phone several times before the man Jorge set down the receiver to get him.

Bud approached Tom and touched his best friend on the arm. "Where next, genius boy? I think your Flying Lab could take us nonstop to Mars if you'll just give the word!"

"Nope," replied Tom, grinning. "I think I want to do a little traveling in the opposite direction!" In his mind he was envisioning the new deep-submergence mini-submarine already under construction at Swift Enterprises, an adventure to be related in Tom Swift and His Jetmarine.

Chow finally came on the line. "Say, boss, is it true what Jorge said, about me bein' cut loose an' all?"

"It's true, Chow."

"Waa-al, I don't s'pose you could postpone it an hour or so, hmm?"

"But why?" Tom asked in surprise.

"It's jest that I'm in the middle o' watchin' some TV on one o' them big-screeners, besides which—that big mattress that shimmies up an' down sure does feel good on this ole back o' mine. So the fact is, I'd rather not be set free jest yet!"